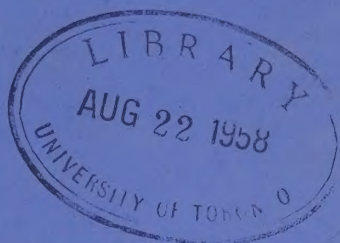


Gov. of Ontario Hydro-Electric J. A. Ross
CA20N Enquiry Commission, 1922-1924
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HYDRO ELECTRIC ENQUIRY COMMISSION

QUEENSTON - CHIPPAWA

Estimates and Appropriations

TORONTO, MARCH 27TH, 1923.

W. C. Coe,
Official Reporter

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Wednesday March 28th, 1923. 4592

HYDRO -- ELECTRIC INQUIRY COMMISSION.

TORONTO MARCH 27th, 1923.

P r e s e n t ;

W. D. GREGORY, ESQ., CHAIRMAN.

M. J. HENRY, ESQ., COMMISSIONER.

LLOYD HARRIS, ESQ., COMMISSIONER.

R. A. ROSS, ESQ., COMMISSIONER.

J. A. ROSS, ESQ., COMMISSIONER.

J. H. W. BOWER, ESQ., SECRETARY.

Q U E E N S T O N -- C H I P P A W A .

ESTIMATES AND APPROPRIATIONS.

N. W. ROWELL, ESQ., K.C. Counsel for the Commission.

J. B. ALLEN, Esq.

I. B. LUCAS, ESQ., K.C.

F. A. GABY, ESQ., Chief Engineer.

W. V. POPE, ESQ., K.C., Secretary of the Hydro Commission, and

H. G. ACRES, ESQ., Representing the Hydro Electric Commission.

F. A. GABY. Examination resumed by HON. MR. ROWELL.

Q--Mr. Gaby, you were going to look up some matters for me which I asked about on Friday. Perhaps you can clear them up now so that we will not overlook them.

A--Unfortunately I had my notes on a piece of paper here and took the wrong ones down to the office, and the others were lost in the room, so that I did not know just what they were.

Q--Then let me repeat. I wanted first the plans and

specifications which you sent out in December, 1916 to various contractors, on which you asked for tenders.

Second, I wanted the statements or information sent out by the Hydro Commission or anyone on its behalf to the Municipalities prior to the vote on January 1st, 1917, in reference to this Chippawa project.

Third, I wanted all additional plans. I think you had some here; you said you had some showing more than one canal. I think you showed me some made in 1917 showing two or three canals. Whatever additional plans you have, made at that time, in reference to the works.

Then you said the other day that this report of Mr. Francis did not cover all the estimates that had been made by the engineers of the Commission. I should like all other estimates made by engineers to the Commission.

A--I think I qualified that statement by saying that those were interim estimates, not official, submitted to the Commission or dealt with by the Commission as estimates. That is, we had a number of interim estimates in between. I will look and see if there are any others.

Q--Just bring me up whatever there are and then we can have any explanation you wish to make with reference to them. Let us have them all.

A--On question number 1, I had remembered that, and I believe we have the copies of the plans and specifications here. Those are the plans and specifications sent out to the various prospective contractors who were asked for tenders.

Q--That will be Exhibit No. 44.

EXHIBIT NO. 44: Filed by : Plans and specifications, let-
: HON. MR. ROWELL: tered in series, A.B. etc.
: 27 Mar. 1923 :

Will you describe for the purpose of the record what those plans consist of? A--Plan A-3-2-9-D.

Q--Cannot we simplify it for the purpose of the record, can you mark them A.B. and C, or something like that? So that it will be simple to refer to on the notes.

A--Call this plan A then, or profile of Canal from Montrose to Smeaton's Curve, showing the borings and a general or approximate profile of rock surface.

Plan B. showing a topographical map for proposed canal location; showing contour lines along the route of the canal and a general location centre line of the proposed canal.

Plan C; which was available in the office for the use of the contractors, showing the sections of the Canal; entitled "Niagara Development profile and sections of power canal from Montrose to Smeaton's Curve.

Q--Plans A and B were sent to the contractors?

A--Yes.

Q--And C was in the office for inspection? A--Yes.

Q--The next is general specifications for concrete, dated October 24th, 1916, being a general specification of the contract.

THE CHAIRMAN : Did Mr. Francis have all of those, Mr. Gaby? A--I believe so, yes; he had all these details, general form of contract, general specifications for excavation, and general conditions of contract.

HON. MR. ROWELL : Is this form of contract and the second document general conditions of contract? A--You might call that the form of tender rather than the form of contract.

Q--This is the form of tender? You now produce the general form of tender you adopted? A--No, those are general conditions of contract. This is the general form of contract,

Q--Such as you use in the Hydro work, or was there any special provision in this? A--There would be certain special provisions to take care of the conditions of the work as far as this Canal is concerned. Each particular piece of work would of course carry with it its special conditions, in addition to which there would be the general conditions of contract, which in more or less detail would apply to almost any or all jobs of the Commission.

Now the next thing was, additional plans showing more than one Canal. I believe I handed you the two copies I had here on Friday.

Q--I think I handed them back Mr. Gaby and asked you to bring them when we resumed on Monday.

A--I do not appear to have them here. You will find in Mr. Johnston's report of February 1st, and I believe also of April 17th, cross-sections of two and three canals that were being estimated on at that time.

Q--As I recall it, the plans you had here on Friday were June or July, 1917? A--I do not remember whether that was the date or not.

Q--You can bring them again? A--Yes. Here is another plan which I submitted but I do not know whether you desire that to be an Exhibit or not. We have in the meantime photographed it.

Q--It is put in as 34. A--Yes, that is right. In reference to the material that was submitted by the Hydro Electric Power Commission to the municipalities for voting in 1917, I have a file of the information and I will look it over and give it to you later.

Q--When the Commission adjourned last evening, Mr. Gaby, you were speaking of the Prime Minister's request of the 18th March, 1920, for information as to the estimated total cost of completing the work, and your answer was that you

did not recall giving any figures either to the Prime Minister or to the Chairman to give to the Prime Minister at that time.

A--At March 18th, no, I do not recall any.

Q--I want to recall to you the answer you made to my question as to how you arrived at 40 millions, which you gave Mr. Clarkson, and is mentioned in his report of April 1920 as the estimate for the year 1919. Your answer was that you met Mr. Clarkson while walking down the hall at the Commission's office, and he asked a question in that casual way and you gave the answer.

"A--Mr. Clarkson, while walking down the hall with me, in the Commission's office, asked me if I thought we could build our canal for \$24,000,000 to \$25,000,000 to be completed some time in the spring of 1919, and I told him, No, in view of conditions that existed at that time, and the changes in the past year, that had not met our expectations, we could not do it for that amount of money. He wanted to know how much, and I told him I couldn't tell, there were no estimates available. He said, "Can't you tell me approximately?" and I said "Probably 60 to 70 per cent increase in wages, and 60 to 70 per cent added to what is the approximation."

"I told him, until we went into the details, I could not give him anything in detail." That is on pages 4462 and 4463. You also told me that you knew he wanted the figures for his general report, that is the report he was making for the Government.

I want to ask you, Mr. Gaby, if that is all the consideration you gave to the matter of that estimate at that time, when furnishing that information to Mr. Clarkson.

A--No, just about that time instructions had been issued to investigate, and prepare reports on the cost of the work.

As I recollect, it was some time in March of 1920 when that information was given to Mr. Clarkson, and instructions had been issued, if my memory serves me correctly, to investigate and prepare a report of the additional cost or the total cost of constructing the Queenston-Chippawa development for five units, and that work was under way at the time; but we had nothing before us, no details upon which we could present to Mr. Clarkson a definite statement as to what the work would cost. We were also faced with the labour situation at the time, which was another condition which was unsettled; that is the claims and demands of the men at that time had been extraordinary.

Q--What date, if any, had you before you on which you based that 60 or 70 per cent or was it just a rough general approximation such as you gave us yesterday?

A--I had before me, of course, the monthly reports that had been sent in from time to time by the engineering and construction departments as to the progress of the work. I had before me the general information on the increase in cost of labour and material, in a general way, but I had no detailed statements compiled from which I could base any judgment at that time; it was just a general approximation of the probable cost, without going into the matter in detail.

Q--I want to draw your attention specifically to the situation to see if you have anything to add to it. You have, in answer to the request of the Government in the previous year, the report of the Commission fixing the estimated total cost at \$25,000,000? A--Yes.

Q--A year later the auditor is preparing a report to make to the Government; you are asked for the estimated total cost; it is an enormous increase from 25 to 40 millions, and it

strikes one as calling for some explanation at least that you should reach that 40 millions in a more or less casual way, as you detailed in your evidence yesterday.

A--Well, going back again to 1919, and probably going over the discussion, we went over yesterday, as I stated before, in submitting anything I did submit to the Commission or to the Secretary of the Commission, or whatever it would be, I had under consideration the conditions as they existed two or three months just succeeding the Armistice: an expectation of a lowering of conditions, an expectation that the world would conserve efficiency.

Q--I do not want to stop you, but this does not touch my question, and you gave that yesterday. A--It is leading up to it, Mr Rowell, and I will be at that directly. I say that our expectations were that the world would probably conserve and become more efficient to meet the tremendous war debts that it had, and we expected a return in a very short period to pre-war conditions as far as labour and material were concerned, we were shocked to find that in May of 1919 we had a tremendous increase, 23 or more per cent in our labour charges, instead of a lesseningⁿ there seemed to be an increased whirl of expenditures and extravagance by the world as far as conditions were concerned, and that continued, and I think was not checked until the winter of 1920-21 or 1921-22; we did not know, expecting again or hoping that we would probably have some change in the winter of 1919-20, we did not know until we were met with the increased demands of the men for increased wages and better working conditions that we were not going to meet our expectations as far as change was concerned. You know there were extraordinary conditions to meet, rapidly rising prices almost from week to week. We therefore in the spring and especially since March 3rd, I

think the first letter of the Premier was that they required information as to the cost of completion of this work. The Commission, knowing this, immediately issued instructions that we proceed to investigate and report on this at the earliest possible moment. We did.

--Just there, have you got the Commission's instructions on that point? A--I don't know that we have. I will look them up . They were instructions made verbally or otherwise because this question of increasing costs and the labour conditions, at almost every Commission meeting were a matter of discussion; they may not have been on the agenda, but the question would come up in some form or another, and be discussed by the Commission.

THE CHAIRMAN : What time do you say the instructions were given, verbally or otherwise? A--Some time in March, 1920. We knew of the communications of the Premier to Mr. Clarkson of March 3rd, 1920, in which he had requested from Mr. Clarkson, this information, which he again asks for on the 18th; and Mr. Clarkson meantime had discussed the matter with the Chairman in reference to the request that had been made to him. We knew of those conditions, and had taken certain action in preparation of estimates and reports. Those took months to prepare, and the Commission had considered the obtaining of independent reports in order to give to the Government the very best information other than that of the Commission's engineers. As I told Mr. Clarkson at the time, the best information I had would only be approximate, and to the best of my knowledge forty millions would be a figure that we would expect as far as the cost of construction was concerned. I then took into consideration the conditions that were existing, that is the 65 or more per cent increase in the labour from 1917 or when we commenced operations on

the Canal, and approximated from the data I had available that at least forty millions would be the cost of the Queenston Chippawa Canal; that was the best information I had available at the time.

HON. MR. ROWELL : Then before the receipt of the communication from Mr. Clarkson, which he brought to your attention and which the Premier had sent to him, had you before that made any estimate of the increased cost? A--No, we had not.

Q--Had the Commission asked you to make any prior to that?

A--The matter probably was under discussion. I have no record of any.

Q--There is no record of any and I just wanted you to say if you recall any request? A--No.

Q--There is no record of any request in the minutes?

A--No, there is no record, I don't know of any records at all.

THE CHAIRMAN : Do you recall any request, Mr. Gaby?

A--As I have stated before, the matter was almost constantly under discussion as far as the Commission were concerned, at various meetings, but I could not definitely make any statement as to whether there was or was not.

HON. MR. ROWELL : Then is it your present view that the Premier's letter was the initiation of the request for information as to the estimated total cost at this time? A--I would not say that Mr. Rowell, no.

Q--Then what do you say? What do you point to as being the initiation? A--I would say that as I have stated before, the matter was almost constantly under discussion by the Commission as to the costs at Chippawa.

Q--Did you make any report of any kind interim or otherwise, between the date in 1918 and the date in 1919, when the

report was given to Mr. McGarry of 24 to 25 millions, and the Premier's request in March, 1920, of the estimated total cost?

A--The only report that I can recollect that I would have made during that period would have been one showing the probable increase in the cost of the work due to increased cost in labour during May or June, 1919.

Q--Did you make a written report? A--I may have, I don't know.

Q--Did you? A--I could not say at this moment whether I did or not. I can look it up and see.

Q--Then we have this estimate in this form. Then the next appears to be the minutes to which we referred yesterday, in which you recommended the appointment of Hugh E. Cooper & Co., to make a report on the cost and character of the work? A--Yes.

Q--Then pursuant to your recommendation, the Board retained Hugh L. Cooper & Co. to make a report? A--They did retain Mr. Hugh L. Cooper to make a report.

Q--And you told us on Friday that when you got that report you were not satisfied with it? A--As a matter of fact we got two reports. We got an interim report on July 6th from Mr. Hugh L. Copper, and then we got a preliminary report on August 8th and a final report in September or October of 1920.

Q--You spoke on Friday of being dissatisfied with the report; you thought the cost was too high. Which one of these reports did you refer to? A--I referred to the final report of the Hugh L. Copper Co.

Q--You stated, as a result of the report being unsatisfactory, that you decided to get a report from Stuart & Kerbaugh? A--Yes.

Q--Which report was it that you had before you when you decided to get the report of Stuart & Kerbaugh?

A--The preliminary report of August 8th.

Q--Will you tell us what your objection was to the Cooper report which induced you to recommend, or did you recommend to the Board the getting of the other expert's report on it?

A--I don't know whether I did or not. I know that the matter was discussed and probably the Board took their own action in connection with it. First we had from Mr. Hugh L. Cooper a report dated July 6th.

Q--That does not appear to be in this report of Mr. Francis? A--You will find it in these letters to the Premier; an Exhibit: I don't know what its number is.

THE CHAIRMAN : Had Cooper done any work for you before in connection with this work? A--No sir.

Q--Had you any special reason for engaging him?

A--Excepting that he had on various occasions made inspection trips over the work, and had discussed the matter in a general way with Sir Adam and the engineers of the Commission; which was made on his own account for his own information. He had on a number of occasions been over the work, and inspected it and gone over it, and discussed the matter with the Chairman and the engineers. I think that was probably one of the reasons. And another fact was that he had been intimately connected with the construction of the electrical development plant at Niagara in the early days of its construction. That was probably one of the other reasons, that he knew conditions to a certain extent, although they were not of exactly a similar nature; the construction of the electrical development was somewhat different to what our proposition was.

HON. MR. ROWELL : Which letter is it that you referred to? A--July 6th, 1920.

Q--In this he states that, we are in substantial agreement

with the figures you have recently submitted to the Provincial Government? A--Yes.

Q--What were those figures? A--As I recollect it, my judgment was transmitted to Sir Adam some time after some investigation had been made into the details of the cost, in May or June of 1920. As checking out these statements and discussing them with the engineers my judgment was that the cost would reach between 52 and 53 millions, and I so informed the Chairman, but no detailed report or estimate had been completed, as Mr. Copper then was engaged on the work.

Q--I want to fix the date as nearly as we can. What date do you say that was? A--In May or June of 1920.

Q--In May or June, 1920 you reported to the Chairman?

A--That in my judgment, the cost of the Queenston-Chippawa Canal would reach between 52 and 53 millions.

Q--Is there any report in writing on that? A--No, there is no report in writing, because the conditions were so chaotic at that time. We had been discussing the labour conditions; we had a strike on our hands, and we had an investigating Commission, investigating labour conditions and rates of wages, and the men were demanding eight hour days, and the general disorganization of the work at that time, and the matter was not settled until the latter part of July; I think they started to work early in July, but the disorganization took place during this whole period; and further in view of the fact that Mr. Hugh L. Cooper was engaged particularly to report on that; his investigations had not been completed; however, he reported on July 6th, 1920, as an interim report advising the Chairman what his conclusions were.

Q--You must have furnished him with some figures on which

he bases this letter;

"With respect to the probable cost of the works as now designed, we are in substantial agreement with the figures you have recently submitted to the Provincial Government."

A--As I remember it, the figures were given to Sir Adam in that general way, as my judgment of what the costs would be, and those apparently were transmitted to the Premier at that time. That is the only thing that I can tie up that statement to, as the statement that I made in May or June to the Chairman as to what my view of the probable cost would be.

Q--Have you a report to the Government on your files, of May 18th, 1920, on the operations and conditions?

A--Is that the report of the Commission?

Q--No, it is a report, a letter enclosing to Mr. Drury a report of the engineer in charge of the operations showing the conditions prevailing at the time? A--We probably have. That would probably be Mr. Acres or Mr. Angell, who was construction engineer, or at least construction superintendent, general superintendent.

Q--Keeping to this question of the estimate, you say that the only thing you can think of upon which this paragraph in Mr. Cooper's report of July 6th can be based is the verbal information you gave to the Chairman of the Commission as to your opinion at that time? A--Yes.

Q--Now looking at the seriousness of the situation as it then stood, an increase of millions of dollars in the estimates, don't you think that a matter of that importance would be covered in some form, a memorandum or estimate or communication, when you were passing it on to an engineer who is specially retained for the purpose of reporting on the question of cost? A--No, I don't know that we did pass it on to that

engineer, he was dealing with the details.

Q--And did he get it? A--Apparently he must have got it from the Government because he did not get it from the Commission or the Chairman of the Commission that I know of.

Q--How did you know he did not get it from the Chairman of the Commission? A--I asked the Chairman what he had given him and he did not recollect giving him anything.

Q--Did you ask Mr. Cooper where he got that information on which he based that? A--No, I did not ask him personally.

Q--Because at this time he had not completed his report.

A--He had not submitted his report, no. He had submitted this interim letter as his report at that time.

Q--Was it at this time you were dissatisfied with his report or was it at some subsequent time? A--No, knowing the manner in which it was subsequently reported, to me, in which he prepared the unit prices in that report, I was very much dissatisfied.

Q--For instance, he asked one of our cost clerks to go to New York and instructed him while there, against his better judgment, to prepare unit costs on the minimum basis of excavation, which is away less than the actual schedules obtained in the operations. Now he asked him to do that against the wishes of this Cost Clerk of the Commission, and he used those cost unit prices for the basis of preparing his report. The Cost Clerk reported to us on returning from New York what he had been required to do by Mr. Cooper, and having that information before us and the general data, and knowing that certain parts of the engineering details of this report were not in conformity with those of the Commission's engineers and myself, the Commission thought it desirable to have a check on Mr. Cooper's report, and

therefore took steps to get Mr. Stuart, a prominent engineer, and Mr. Kerbaugh, a very prominent contractor, to report on the work. At the same time called in Mr. Lea, the original consulting engineer, to report on the engineering features of the work. Those were some of the principal reasons for my being dissatisfied with the character of the report.

Q--Let me see if I follow you. You say in arriving at the estimated unit cost, he instructed him to use lesser quantities? A--No, lesser quantities of actual material for the schedule. For instance he estimated that we could take out only 75 to 150,000 yards per month, and on that basis, and assuming the work completed at the end of 1922 he based estimates or unit costs which were the basis of the report. I have just forgotten the exact number of yards but they were away less than the actual schedules that we had prepared for carrying on the work and our schedules that had been prepared and discussed with the engineers of the Commission.

(Page 4485 follows)

Q--Then let us see if I rightly understand your testimony. He was basing his estimates on slower progress?

A--Very much slower progress.

Q--Than that which you had estimated? A--Yes.

Q--And basing it on slower progress he got higher unit costs?

A--Yes, he would, on account of the higher overheads which would be chargeable to the unit costs.

Q--Then when you did get his estimate of the total cost of the five units installed, what did it amount to?

A--Including the costs that are not included in the estimates of the Commission, it amounted to some sixty-six millions of dollars for the first five units on the basis which he stated that we would carry the work on, and some sixty millions on the basis on which he would carry it on, having certain variations connected with it.

Q--On the basis of your plans, his estimate was some sixty-six millions? A--Including items which we had not included in our estimates.

Q--Including what? A--For instance, he included a skimmer and an iceway amounting to some four or five hundred thousand dollars, which we had not included at all, and did not think necessary.

Q--What struck me was that it was surprisingly near the actual cost as it subsequently developed for the five units. He gives you an estimate of \$66,423,418?

A--Well, that may have been a coincidence.

Q--And you reject this estimate because you claim it is too high? A--I did not say that. I stated that I rejected it because I did not agree with the treatment, and with the manner in which those unit costs were arrived at.

Q--Well, it did result in an estimate which you considered at that time much too high? A--I did think the estimate was high, yes.

Q--And which you at that time considered at least ten millions too high? A--I did not say so, sir.

Q--I am asking you. A--My judgment said fifty-two to fifty-three millions. That is on the rough figures I had in May or June. They were not based on any detailed information which was subsequently available in connection with this construction. I was trying to get the details of estimates in which this varied in order to answer your question which you previously put. For instance, he used \$499,350 for what he calls the skimming work; he used an additional \$225,000 for a test on Foreby; and an additional \$250,000 for tests at the power house. He considered that the cost of the work that had already gone before, in his estimate of May 1st, 1920 was \$14,000,000. Mr. Kerbaugh in his estimate considered it at \$10,900,000 or a little over three millions dollars difference there..

Q--But if you eliminate these three items which you have mentioned, \$499,000, \$225,000 and the \$250,000, they are in respect of work which you thought unnecessary?

A--Yes, and not contemplated in the original estimate; and then the other point was that he had used fourteen millions as the cost of the work completed and entering into the cost of the work on May 1st at \$14,000,000. Mr. Kerbaugh at the end of August used \$10,900,000, as the cost of the work. There was that difference in the basic principle of the estimates.

Q--Does not Mr. Kerbaugh point out in his report that that

ten million dollars is not the actual expenditure up to that time? A -Yes.

Q--And he makes quite clear in a note to his report that he includes in the estimated expenditures for the future a very substantial sum already expended?

with in

A--Well, it is dealt/almost the same way in Mr. Cooper's report.

Q--What I want to get at is to see that we are not confusing the issue by stating that one estimates a certain amount of money as representing the work done, while another uses another figure. What I draw to your attention is that in the Stewart and Kerbaugh report, where they use ten millions and some odd as the amount of the work done, they point out that that does not represent the total work done up to that date?

A--Then this estimate is in error to the extent that the unit prices which Mr. Cooper uses include all the plant and the part of the work that will enter into future unit prices have already been included in his total disbursements to date. In other words, the \$14,000,000 is in excess of the actual cost of the work to that date by the amounts which are included in the unit prices for future work to be done. I cannot say within five or six millions of dollars; that is the error in adding that figure and using the unit prices which he did. There was, in other words, duplication in his unit prices and in the amount which he used as a total amount of work done to that date.

COMMISSIONER ROSS: You had your disbursements to date and could not you have told what they were? A--Yes.

Q--Do you know what they were? A--Oh yes.

Q--Were they less or more than that? A--They were ~~more~~

more than fourteen millions in May, according to my present information. I am not definitely sure but I believe they were more than ~~fourteen~~ millions. We have never made any attempt to check them up. But the point is that on May 1st, 1920 the work ~~done~~ already done, the disbursements, is placed at fourteen millions, as far as Cooper is concerned; and the amount chargeable on August 31st, by Kerbaugh and Stewart is placed at some \$10,900,000. Mr. Cooper's unit prices also include the charges for plant, the charges for overhead and all those things that will enter into the future cost of the work; yet he has also included that same figure and cost of plant and so on to a large extent in the \$14,000,000.

Q--So that you would say he has included his plant twice?

A--Yes.

HON. MR. ROWELL: His figure of fourteen millions is correct for disbursements up to that date?

A--As I say it, I doubt it. Without checking it, on my information at the present moment, I doubt whether it is correct.

Q--I understood you in answer to Mr. Ross to say it was fourteen millions and some odd, and he had used fourteen millions in a round figure? A--What I intended to convey was that it was something in excess of fourteen millions, the actual expenditure at that date. I have not looked it up for some time.

COMMISSIONER ROSS: Then Kerbaugh and Stewart's figures were somewhat too low? A--No. You will find them in Mr. Clarkson's adjustments, which he made in 1922, I think it was.

COMMISSIONER HANEY: I am thinking that taking your statement that Cooper was too low, and Kerbaugh being ten million dollars at a later date would be even too low still? A--No, I think you misunderstood me, Mr. Haney. What I say is that the \$14,000,000 was too high because it included in the unit prices the plant for future work; and in the \$14,000,000 they had included to a large extent the cost of all the plant which would be written out in future work. I think you will find on file Mr. Clarkson's report to the Government in which he prepares a statement or reconciliation of Messrs. Kerbaugh and Stewart's to August 31st, 1920, in which he goes over that to show how he arrived at that statement.

Q--I would judge from Mr. Kerbaugh's letter that he had in mind the possibility of taking over that work on a contract basis? A--Yes.

Q--And with that in view, he would naturally make the amount expended as low as possible under the circumstances.

A--Well, I do not think he did that, Mr. Haney, because he was very careful and he tried to arrive, with the information available which was very great, at what the actual amount of plant was that had been written off into the cost of the work and with unit prices which had gone before, and to only leave that amount of plant in a reserve account which had been written off any future unit prices in the cost of the work. I think as far as his opinion went that is proven by the reconciliation which Mr. Clarkson prepared and put before the Government.

COMMISSIONER R.A. ROSS: If Mr. Cooper had contemplated anything in the way of contracting, it would have been to his interest to have had the rate as high as possible?

A--Yes.

Q--And the quantities as low as possible and the schedule as low as possible? A--Yes.

COMMISSIONER HANEY: Practically they were both outside of the contracts which you had let for electrical machinery?

A--Yes.

COMMISSIONER R.A. ROSS: What would be about your plant account at that time? A--About ten or eleven millions. I have it here almost exactly. The plant account itself, not counting work that had already been done, was \$12,723,085, on August 31st.

THE CHAIRMAN: The total was something over nineteen millions finally? A--About seventeen millions, I think it was. The figure I have in mind is between seventeen and eighteen millions.

Q--The final cost of the plant was something over \$19,000,000, wasn't it? A--Between seventeen and eighteen millions is the figure I have in mind.

HON. MR. ROWELL: I want to draw your attention to what Stewart and Kerbaugh say in their report. It is true that in their estimates to August 26th, 1920 remaining cost and grand total, they put the cost to that date at \$10,995,646, but they accompany it with this note: "Attention is drawn to the fact that the total expenditure to the end of August, 1920, was \$23,268,067, of which total \$10,995,643 was the actual cost to August 26th, 1920 of the permanent work done on the project, while the balance is partly included in the items making up the remaining cost, apparently, in the items of the cost of super-structure and electrical equipment, and partly in the estimate of the cost of the ultimate installation."

A--Yes.

Q--It would appear from that that the difference was not wholly made up of plant, by any means? A--No, but I said largely of plant; but in addition to that the \$10,900,000 was referring to canal operations only. You will notice that in Mr. Kerbaugh's report he starts on the electrical equipment and puts it at some \$5,300,000 odd.

Q--Speaking generally, you had an estimate of \$64,000,000 and some odd? A--\$66,000,000.

Q--Of which approximately one million dollars represented work which you said was not covered by your plans?

A--Yes.

Q--Leaving the Cooper estimate something over sixty-five million dollars. Now did you retain Stewart and Kerbaugh before you got this estimate, or was it after you got this estimate that you retained Stewart and Kerbaugh to make this report? A--As I remember, it was when I got the estimate in the preliminary report from Mr. Hugh L. Cooper, somewhere around August 7th, on receipt of that report and the information contained therein the matter was discussed thoroughly and the Commission decided to obtain the services of other engineers to check up on what had been submitted.

Q--This was contained in the preliminary report?

A--Yes, that was contained in the preliminary report.

Q--So it was when you got the estimate of this amount from Cooper that you decided to get other engineers to report upon the cost? A--I would not say it was that amount.

It was when I got the report, and knowing how the report was prepared, and having lost confidence in the manner in

which it was prepared, we got other independent engineers to report upon the work; as to whether they saw Mr. Cooper's report or not, I do not know.

Q--I do not want to go now into the question of other comments on the work but just to keep strictly to the question of estimates. Then have you any Minute in connection with the retaining of Messrs. Stewart and Kerbaugh? I find a Minute authorizing or covering your recommendation for the retaining of Mr. Cooper, of Cooper and Company?

A--I do not know. I have not looked over the Minute books at all.

Q--I do not find at present any Minute which cover the consideration of this report and the decision of the Commission to get a new report by reason of dissatisfaction or otherwise with the Cooper report? A--Oh, I know the matter was discussed, from my own knowledge, in the Commission meeting and I understand that the matter was presented to the Government of what the Commission proposed to do in connection with the obtaining of their services; but I have not looked at the Minutes. I could not direct you to any Minute at all. If you could not find it in there I presume there is none in there. I do not know.

Q--Then having pretty definite ideas based upon the information which you had gathered about cost, of the fifty-two or fifty-three millions, was it? A--It was just a rough approximation, in May or June. The cost records were there in detail, the amount of work that had been done was there, reported from month to month in very great detail. It was simply a matter of the engineers going into it and obtaining actual facts as to what the cost had been in the

past, and it was then a matter of judgment on their part, taking conditions as they were then existing and what the probable future would bring forth, and they would prepare an estimate based on those facts. I can say in connection with those estimates Messrs. Stewart and Kerbaugh and Hugh L. Cooper and all the engineers reporting were given access to all the reports of the Commission or accounts of the Commission, the cost records of the Commission which had been in existence up to that time, and were asked to prepare a report to the Commission for which they were prepared to assume the responsibility.

Q--Did you go into the matter with Messrs. Stewart and Kerbaugh? A--I did not personally, no.

Q--Did you recommend Messrs. Stewart and Kerbaugh as the engineers to make a further report? A--I do not know that I recommended them. The matter was brought to the Commission as to the qualifications of these men. I certainly did not disapprove of them.

Q--Who recommended them, or how did it come?

A--I believe Mr. Kerbaugh probably came through Mr. Angel, who was General Superintendent, on the work, or from Mr. Cores, knowing Mr. Kerbaugh and his past experience.

Q--Then if it did not come directly from you, it would come through some of your subordinates? A-- It came from the knowledge of the engineers of the Commission, of these men. I think probably Mr. Stewart was recommended by Mr. Kerbaugh.

Q--Who recommended them to the Commission?

A--As a written recommendation?

Q--I do not care in what form. I have not yet seen a written recommendation. Who recommended them to the Commission?

A--That I cannot say offhand. The matter was dealt with in detail, as far as Mr. Stewart was concerned, by Sir Adam Beak.

Q--Did you or did you not recommend them to the Commission?

A--No, I did not. The Commission had their own way of getting engineers.

Q--Did Mr. Acres recommend them to the Commission?

A--I doubt it, as far as Mr. Stewart is concerned.

Q--Well did he recommend Mr. Kerbaugh to the Commission?

A--He may have, yes.

Q--I thought all Mr. Acres' recommendations passed through you to the Commission? A--As a rule they did.

Q--Did this recommendation pass through you to the Commission? A--It may have.

Q--If so, did you approve it? A--Yes.

Q--I just want to see if you take the responsibility for recommending Mr. Kerbaugh or not? If not say so.

A--As I told you before, in the beginning, I did not disapprove of them. As to the technical details as to how the recommendation came about to the Commission, I am at a loss for the moment; but I certainly approved of any recommendation which was made as far as these two gentlemen were concerned. My information was satisfactory as far as their experience was concerned.

Q--Then who did you entrust with the responsibility of taking the matter up with them? A--We instructed them to take the matter up directly with the General Superintendent

and the engineers right on the ground.

Q--Did you agree with the statement in their report that all unknown conditions and uncertainty of construction have been eliminated? Perhaps I had better read what was said:

"In general we have to advise you first that while this is a large undertaking it is in excellent shape for early completion; second, That all unknown conditions and uncertainties of construction have been eliminated. Third, That the equipment is suitable. Fourth, That we think the peak of inefficiency of labour and the peak of prices of material and labour have been reached. Fifth, That with no unusual labour conditions and with materials properly supplied, we consider the estimates of cost and dates of completion as feasible and dependable."

Do you agree with that? A--That is their report, sir.

I do not know what those gentlemen had in their minds at the time they prepared that report.

Q--I am asking you simply if you agreed with it?

A--Agreed that they had taken care of all unknown conditions?

Q--I ask you if you agreed with this concluding part?

A--I am unable to state whether I do or do not agree with it. I did not go into the details of it with them.

Q--"In general, we have to advise you first that while this is a large undertaking it is in excellent shape for early completion." Do you agree with that? A--I agree that it was in excellent shape for early completion, yes.

Q--And "Second, that all unknown conditions and uncertainties of construction have been eliminated."

A--I do not know what they had in mind, or exactly what detail they had used in arriving at that statement.

Q--When you got this report, then, did you agree with it or disagree with it? A--I accepted it. I had no reason to disagree with it.

Q--It is quite simple, it seems to me. You disagreed with the Cooper report? A--Yes.

Q--And you thought there should be a new report? A--Yes.

Q--And this new report is brought in. Did you agree with the new report? A--I did not disagree with it.

Q--Did you agree with it? A--I did not say that I agreed with it.

Q--Did you agree with it or not? A--I do not know that I did.

Q--If you did not agree with it, in what respect did you not agree with it? A--For instance, in the first place in submitting my report I added certain things, as far as interest was concerned. I do not know whether that would be disagreeing with it or not. But from my general knowledge of the proposition I had no reason to disagree with it.

Q--Apart from the question as to the amount of interest, did you agree with this report at this time.

A--Well, the only way I can answer that, Mr. Rowell, is that I did not disagree with it; and as far as I could judge from the information that I had available, it was giving the Commission the best information possible on the cost of that work.

Q--Then is it fair to say that you agreed with it?

A--I accepted the report. I did not disagree with it at all.

COMMISSIONER R.A. ROSS: On the whole question of employment of engineers and their reports, these were asked for by the Commission? A--Yes.

Q--And were a criticism more or less implied on your work?

A--Yes, sir.

Q--Where then would you stand in the picture of appointing these men or of criticising their report as it was presented to the Commission? A--As a matter of fact, I did not at all, except that I did not disapprove of them.

HON. MR. ROWELL: You recommended the men, Mr. Cooper, for instance, who was to criticise the work? A--I recommended Mr. Cooper, yes.

Q--Then, when you came to prepare the estimate for the total amount in 1921, you told us yesterday, you added ten per cent. Was that only for interest? A--No, just a general amount to take care of any possible discrepancies that there might have been. I did not know in general of any at the time.

Q--What was the item of interest which you said was not included in their report? A--Oh, an item of approximately two millions and a half.

Q--And you added approximately how much? A--I want that clear Mr. Rowell. The two and a half millions that I added is interest that is not generally taken into account in contracting work. They took into account the current interest during the period of construction, and that is added in the estimates; but in addition to that there are expenditures that are for past expenditures years previous upon which interest must be paid from time to time. That is a matter of financing, and upon that financing I added interest for expenditures which had been made previous to the year ending October 31st, 1920. I had no reason to add any interest on account of the unit cost or the current interest during the period when the work was done. It was interest on moneys expended in the past.

Q--Interest on \$10,000,000 that is the estimated expenditure up to that date? A --It would be the interest on all moneys, the twenty-three millions, or the twenty-five or twenty-six millions that had been expended previously to October 31st, 1920.

Q--Then you say that Stuart & Kerbaugh in making their estimates of the total expenditure only included interest on that portion of the work which remained to be done at the date they made the estimate? A--I said interest that had been included in previous years. That is, 1919, for instance, they had the total expenditure up to the end of 1919, and added on from month to month. You see each month the interest was not added into the total account.

COMMISSIONER R.A. ROSS: That is your idea is that a contractor has to pay not only his wages but the interest on his own expenditure and plant and he puts that into his unit cost? A--Yes.

Q--Then when he turns that over or is paid for his unit costs from month to month and turns that work over to the owner or has him pay for it, the owner has to go to his bank or wherever he gets his money and has to pay interest during construction on the accumulated balances, in addition to the amount allowed by the contractor in his unit costs?

A--That is correct.

THE CHAIRMAN: Have you a computation showing how you made up this two and a half million dollars interest?

A--No, we have never filed any statement showing that.

Q--I do not see how you would make two million dollars if Stuart & Kerbaugh made the computation as estimated?

A--That would be interest expended before by the Commission, not current interest; and as far as the two and a half millions is concerned I simply added ten per cent on to the general work which gave me approximately four million dollars odd. I added that on to take care of the difference between the two and a half millions and the \$4,400,000. Sent to contingencies.

Q--What rate did you take? A--Our rate then was something about six per cent.

Q--Then the two million dollars might be somewhat out ?

A--Oh yes, it was not any accurate figure at all; It was simply the ten per cent on the forty-four millions, to take care of possible contingencies.

COMMISSIONER R.A. ROSS: But in making up the final estimate, in order to know what the plant was eventually to cost, you would have to add not only interest on the \$23,000,000 already expended, but you would have to add interest from month to month on the balances which you had paid over to your contractor? A--Yes, sir, there are two different types of interest, the interest during actual operations, as Mr. Ross has very fully put it, chargeable to the general contract and unit prices; and in addition to that there is the financial end of it, the interest on expenditures already made by the owner.

THE CHAIRMAN: Of course the Government in ascertaining what the final cost would be would have to include all that item? A--Yes, we knew that, and we included it.

Q--I would have thought that Stuart & Kerbaugh would have added that into? A--I think he put that very clearly in his evidence before the Public Accounts Committee. He looked

upon it in the same manner as a contractor does, and he had taken the total expenditures including interest up to a certain date, that is the year before, and he had taken that as his starting point as it were, to prepare his estimates, and then he took his unit prices from that. On including current interest, apparently the interest item there had not been neglected; but as far as he is concerned, it had not been considered as the cost in his view of the work.

Q--Of course the Government did not want the interest from the contractor's standpoint, but they wanted the interest from your standpoint.

A--Yes; apparently that is a misunderstanding, but I took care of that by adding an additional ten per cent and also an additional \$500,000 for 1922.

HON. MR. ROWELL: But that does not come out until Stuart & Kerbaugh are trying to explain the discrepancy between their total estimate and the total cost?

A--I think that was the only opportunity to discuss the thing.

Q--I cannot follow in the actual reports and the instructions, and so on and see that they were asked to report on any such basis as you suggested, and I want to see what your explanation is. The criticism to which you referred to in your letter and Minute recommending the Cooper appointment was a criticism you told us yesterday of the expenditures at Niagara?

A--Yes.

Q--You got the Cooper report which gave you an estimate of \$66,000,000, which you thought was wrong and much too high?

A--I was dissatisfied with it in view of the manner in which it was prepared, and to my direct knowledge as to how it was prepared.

Q --And you thought it was much too high, as you have already told us? A--I thought that the manner in which it was prepared, yes, it was too high.

Q--And someone in connection with the Commission recommended that you should get other engineers to report upon this same matter upon which Cooper had reported? A--I do not know but it may have come from Sir Adam himself.

Q--Somebody decided that the Commission should get engineers to report on the same matter as Cooper had reported upon, because you decided that you were dissatisfied with the Cooper report?

A--Yes.

Q--Then, in the absence of something put in, one would assume that they were reporting upon the same subject matter?

A--They were.

Q--Have you got the instructions that were given to Stuart & Kerbaugh? A--No, I have not got them.

Q--Were the instructions written or verbal?

A--That I cannot say without looking up.

Q--Well, will you look that up and see if you can find it. I see in their report, "In compliance with your request that we make an inspection of your construction, equipment and methods at Chippawa-Queenston Development on the Niagara river and to advise you of our opinion and conclusion on the following features of the undertaking, to wit: One, suitability of plant for the construction programme proposed; two, possible dates of completion of the canal for the generation of powers by the first and second units at power house; third, the probable cost to complete." Then they go on and deal with the whole subject matter in their report. Now did you give them any instructions as to how they were to prepare their report,

as to what they were to include in it, Mr. Gaby?

A--I did not, no.

Q--Who gave them the instructions that they got?

A--Apparently the Chairman or the Commission directly.

Q--Mr. Lucas in his statement yesterday to the Commission, said that the Prime Minister and representatives of the Commission, as I understand, went over the work on the ground in connection with the Stuart & Kerbaugh report? A--Yes.

Q--Were you present? A--I was only present for a very few minutes on an evening meeting, when the engineers were presenting their reports to the Premier and the Commission.

Q--Where was that? A--At Niagara Falls.

Q--What was the Prime Minister trying to get at at that time, total cost to complete? A--No, I do not know what. He was considering the reports that had been submitted by the various engineers, both Stuart and Kerbaugh and Mr. Lee and Johnson, and other reports which had been submitted. He had before him at the same time and was discussing the Hugh L. Cooper report and the report of Messrs. Stuart & Kerbaugh, Lee & Johnson.

Q--Did you point out at this time to the Prime Minister or to the Commission that Stuart & Kerbaugh's report was not complete in the sense that it did not report--

A--I had not seen it at that time.

Q--When did you first point out to the Commission that the report did not cover all the items that should have been included at arriving at the total amount? A--I do not know that I pointed out particularly. I took the report and presented my report to the Commission asking for

appropriations on that information.

Q--You presented your report to the Commission asking for appropriations in the following year? A--In February.

Q--This report was made in September, 1920? A--Yes.

Q--Now then, in this report they estimate a certain amount for contingencies? A--Yes.

Q--Of ten per cent? A--Yes.

Q--Did you think when you presented your estimates that that item of contingencies was too low? Is that why you added ten percent more to the contingencies? A--I would not say that I considered it too low, but in my own general judgment and to be on the safe side I added ten per cent to the cost of the canal construction.

Q--Why ten per cent, why not five, or why not fifteen per cent? I want to get at the basis on which you added that figure? A--Five per cent would not have covered, probably, the extra interest charges in connection with this work, and therefore I simply took ten per cent as my judgment to take care of discrepancies. I do not know of any particular reason except to take care of discrepancies. I had not up to that time particularly analysed the report.

Q--Ten per cent on that total would be about fifteen per cent additional of the contingencies item, would it not?

A--No. The items that I took was \$39,870,000 plus \$4,700,000. I added on plant and also on the estimated residue on plant, and from the total net cost,--I took both those items and it ran to about \$44,500,000.

Q--And you took ten per cent on that \$44,000,000? A--Yes.

Q--\$44,500,000 with an addition on that? A--Yes, and there is another \$500,000 in the year 1922.

Q-- Is that for additional work ?

A-- No, just to take care of extra contingencies.

Q-- Making a total of some \$49,000,000.00?

A-- Yes.

Q-- That gave you, then, as contingencies, \$4,900,000.00 plus \$3,600,000.00?

A-- Less interest, of pretty near two and a half millions.

Now there is one thing I want to draw to your attention that had materialized between the time of making this report, which you will know provides for a date of completion in November. The Commission had decided to go on with the dredging operations as recommended here, and in view of the fact that we had a tremendous rush schedule to be carried on, I considered that an additional contingencies item was necessary.

Q-- Then part of the consideration which led you to add this additional ten percent was a decision to rush that work ?

A-- Yes, and deal with it by September 1st, 1921.

Q-- When did you get those instructions ?

A-- Some time during December and January, 1920-1921.

Q-- Did you get written instructions on that ?

A-- It would come in an instruction or authorization to go on with arrangements for the rental of the dredging equipment and to carry on the suggestions of completing the work by September 1st, 1921.

Q-- What was the object of completing by September 1st, 1921 ?

A-- In order to meet the increased demands for power in the fall of 1921.

Q-- What increased demand was there in the Fall of 1921 ?

A-- There was one thing of course, the load of the Toronto Street Railway, it was being taken over by the City of Toronto and that was one ; but our general estimates showed that we would have an enormous increase in our load which we could not take care of by any other way than by the Queenston-Chippawa development or by purchase elsewhere.

THE CHAIRMAN: You might have purchased elsewhere?

A-- No, in 1920 it was a doubtful thing ; but on account of the slackening off of industrial conditions, in the spring of 1921, we were able to buy power that we could not have bought in 1920. That is the shutting down of certain electro-chemical works on the United States side enabled us to get the power.

COMMISSIONER ROSS -- Your program was set for September?

A-- Yes.

Q-- How nearly did you complete that program ?

A-- We slowed down in July ; but I would say that with the exception of the equipment which, on account of the fire destroying the plant in the power house, was lost, we would have practically completed the work at that time.

Q-- And what was Mr. Cooper's program ? Where did that extend ?

A-- To the end of 1922 or the first of 1923, nearly fifteen months later.

HON. MR. ROWELL -- Why did you slow down in July 1921 ?

A-- In May I kept getting the cost reports, and in June, and we noted that the estimated unit costs were rising, and instructions were issued to prepare reports at once in connection with this matter, in detail. And in view of the fact that other arrangements could be made to continue the Power Company's contract beyond September, 1921,

further, in view of the fact that we could probably obtain a supply of power from these other companies, which was not known in December and January, 1920, and in order to conserve and keep costs down to the minimum, we decided it would be better to cut out the inefficient night shift.

Q-- You say one of the considerations was that arrangements had been made to secure the Toronto power ?

A-- To carry the Toronto Railway load on for another year.

Q-- When were those made ?

A-- I cannot recollect the exact date, but I think it was in the Spring or Summer of 1921.

Q-- Then, having made those arrangements, it was not necessary to speed up for the purpose of carrying that particular load ?

A-- That was not the only reason. That was probably one of the reasons. The other reasons were that we were able in June and July, 1921, to obtain power from other sources, in view of the slackening of developments such as electrical chemical works, and further we had purchased the Toronto Power Company plant from which we could get power, on account of the electro-chemical plants slowing up.

Q-- Did that lower the cost of it ?

A-- Yes, we eliminated the rush or night period.

Q-- Did this rush period materially increase the cost of doing the work ?

A-- I would say yes.

Q-- Have you any estimate as to how much it increased the cost of doing it ?

A-- Not in detail ; I do not believe we have. You might get general estimates of simply what the increased costs would be ?

Q-- Have you any idea ? A-- Well, I would say that the

efficiency of the men on the day shift over night shift per unit increased up to thirty seven percent.

Q-- I would like it in figures. Did it affect it by one million or five million? A-- I would not like to say offhand just how many million it was, but it would be several millions, at any rate, the rush period.

Q-- Is that a matter on which you could give information? Have you the data upon which you could give that?

A-- It would be more or less a matter of judgment, and it would have to be based upon an opinion.

COMMISSIONER ROSS -- You dropped from a three shift to a two shift day? A-- No, we dropped from two to one shift. It was inefficient to have three shifts. That was the reason for the strike in 1920, which disorganized us so badly. They wanted three shifts, but we pointed out we could not take care of three shifts, because we would have no time to oil up and look after the machines, shovels, etc.

THE CHAIRMAN -- Was there more power available than you secured yourselves? A-- A very little. Probably we might have gained 10,000 horsepower more, but not much more. We purchased about 90,000 horsepower, as I remember it, from outside parties during the summer and fall of 1921. That was 90,000 additional horsepower to take care of the needs of the municipalities.

HON. MR. ROWELL -- Was there any other definite contract before you other than the Toronto Street Railway one that you required to supply power for?

A-- No, but the general requirements we knew, our knowledge of the situation that we would never be able to get through and meet the demands of the municipalities in the fall of 1921 without an additional supply of power;

and those demands usually start in September and go on in increasing amounts in October and November.

Q-- Now, you have given us your estimate in 1921 as being the fifty four some odd million dollars ? A-- Yes.

Q-- Then in 1922, in the Chairman's letter to Mr. Drury, of February 10th, the estimate is given as \$65,365,000.00. Now I just want to draw your attention to this consideration and see if you have any comment to make upon it. From 1917 to 1922 inclusive, each succeeding year I find in the records we have gone over a request from the Government for information as to the estimated total cost. I do not find in any year in submitting your estimates you ever gave this information until specially requested by the Government to do it ? A-- As a rule, you know, that information was given and requested for the purpose of budget speeches and for answering questions on the floor of the House ;

and I think we find up to the date on which Mr. Drury sent in his letter of March, that was the case ; and I usually upon the request of Mr. McGarry or Sir William Hearst, prepared them little memoranda of the work covered by the appropriations and in general.

Q-- I want to draw your attention specifically to this because it struck me as rather significant ? A-- I was just telling you what they were used for each year.

Q-- Each year, apparently, there was pressing from the Government for an estimate of the total cost, probably for the reason you have given us, that they wanted to make a statement to the House and country, but in no case do I find that the Commission in sending in their estimates give this figure until after it is requested by the Government. I want to know why was it ? Was it because the Commission thought, or you, as chief engineer, advising,

that you had the right to go ahead and spend whatever you required and it was the duty of the Government under the Act to provide the money ? A-- No. I think that up until the end of 1920 or at any rate succeeding those extraordinary conditions in 1919, that the Commission, at any rate as far as I was concerned, did not deem that there was any warrant in view of our future anticipations of the changing of the estimates, up to 1919. I am now referring to the estimates of 1917. In 1920 there was a material change in conditions, and we saw that those conditions or that our anticipations or expectations had not materialized and that there was a change of conditions; and before we submitted our estimates as a matter of fact we did obtain a request from the Premier for a report ; and the Commission, in view of the then existing conditions, issued instructions to prepare such a report, which resulted in the reports of Mr. Cooper, Stuart & Kerbaugh, Lee & Johnston.

Q-- Let us draw your attention to these reports made to the Government, because I am dealing now with reports made to them, January, 1917. It is \$10,500,000.00 or \$13,439,000.00, depending upon the power installed ?

A-- Plus nineteen or twenty percent, yes.

Q-- You have already told us that you estimated the savings you would be able to make and that those figures would hold ? A-- But to make them on the same comparison as 1915, you would really have to add the fifteen percent.

Q-- In February, 1918, to Sir William Hearst, seventeen to twenty four millions ? A-- Yes.

Q-- In February 1919, to Mr. McGarry, twenty-four to twenty five millions ? A-- Yes.

Q-- February, 1920, to Mr. Clarkson, and apparently to

the Government, \$40,000,000.00 ? A-- I do not remember giving it to the Government. We were then, in February or March, getting ready to prepare a detailed statement of costs for the Government.

Q-- February 1921, \$55,000,000.00 ? A-- Yes.

Q-- February 1922, \$65,665,000.00 ? A-- Yes.

Q-- Now then, there was a difference between the original estimate of ten to thirteen millions, and the second estimate of seventeen to twenty four millions, the estimates for 1917 and 1918, due to a very important change in the character of the structure from the 6,500 foot Canal to the 10,000 foot Canal ? A-- Yes.

Q-- Did the difference in those two estimates arise wholly out of the change in the character of the Canal and the consequent changes in the general scheme of development ?

A-- I should say so, and the statement that we had made in the meantime as to the probable unit costs. It was an entirely new estimate based on the conditions as we saw them in 1917 with the increased capacity from 6,700 to 10,000 feet ; the development was in general the same ; that is, the detail features were different, the intake was different and the excavation was different.

Q-- I want just this point to make it quite clear whether in your opinion the excess of the estimate of 1918 over the estimate of 1917 was due wholly to a change in the size and character of the work, or was it due to the omission from the original estimate of any items you thought should be included, or due to a change in prices or material and labor ?

A-- All those items entered into it, a change in the prices of material and labor and also a change in the increased capacity of the development.

Q-- Are you able to say how much was due to a change in the capacity of the development and how much was due to the change in labor ? A-- No, but I could do that .

Q-- Then we come to an estimate of February, 1918, which includes the changes. You told us that the plans upon which those estimates were based were changed in two respects that added to the cost, one in the lining of the Canal and the other in the change of the intake ?

A-- And the deepening of the Canal and the increase in capacity of the forebay.

Q-- To those two changes ? A-- Four changes.

Q-- According to Mr. Francis' report they added to the cost so as to bring it up on the basis of your estimate No. A-2 ? A-- Well, we have had it up before, and I do not agree with the estimate A-2. You mean A-2 submitted with the Francis report, that is all right.

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Q--That brought it up to the figure of \$27,025,635, including the change of intake ? A--The report and recommendation of 1918, and the change of the intake, yes.

Q--Then, that figure is the estimate of the cost of the work as it was completed, based on the considerations you have already given us. I want also to get the type, design, and character. A--With the qualification as to the considerations as to the manner in which those statements were submitted to the Government, that is correct, yes. That is, taking all the considerations I gave in the past evidence as to what were my anticipations of the future, and so forth.

Q--Then, Mr. Gaby, we have the estimate as of 1918, for the work as completed, including the change in the intake, amounting to \$27,025,635 ? A--You have the compilation of those statements, yes.

Q--Then, you have the estimate of 1922, \$65,000,000 ?

A--Yes, but you cannot compare those things.

Q--That is what I want. A--You cannot compare those things because in one situation we are looking forward to the anticipation of pre-war conditions in connection with the 1919 compilation, which are estimates based on 1917, on conditions as they actually existed.

Q--We have those figures that you reported to the Government ? A--Exactly.

Q--What I want to get is your explanation as to the difference, not in detail, but in general ?

A--The explanation of the difference between those two ?

Q--An explanation of the difference between \$27,025,635, and \$65,000,000, both relating to the same work ?

A--It is entirely due to the difference in the increased cost of labour from the time those unit prices were prepared, to the date of the last estimate of 1922, including the

increased cost of materials, and the extraordinary conditions that were existing in that period, such as surtax, war taxes, custom taxes on imports, and in connection with the increased freight rates, which are all results of the increased cost of living, and resulting therefore in increased cost of wages and materials.

Q--Let us see if we can analyze it a little better, and we will deal with the increase in the estimated cost of your hydraulic plant and equipment ?

A--There is not a great deal of difference, perhaps 5, 10 or 15 per cent.

Q--Just let us see the comparison of those. Take your estimate for the hydraulic part of your plant and equipment, that was estimated ^{in the} \$24,000,000, and compare it with the item, or cost of the same part of your plant and equipment in the \$65,000,000.

A--I do not appear to have the \$65,000,000 estimate here.

Q--You have the actual cost of the hydraulic equipment ?

A--I haven't it before me, no.

Q--You cannot make a comparison ? A--I cannot compare it without getting the estimates.

Q--Will you bring those this afternoon ?

A--I will try to get them at noon.

Q--If you will look it up; I want to be able to get the different items; you have them summarized in the estimate of November 27th 1917 ? A--They are in these reports here; we haven't the \$65,000,000 estimate here.

Q--If you will bring them, so we can see what the differences were in the main estimates between those figures, and it may come down largely to the labour item you have mentioned. You can look that up again, Mr. Gaby, and we will go into it after lunch.

I want to ask you a few questions in reference to the requisitions for appropriations that were put in from

year to year to the Government. Take the estimate in 1914, of \$35,000,000, of which you have already told us, so we need not go into that. There was the estimate for the year 1915-16 amounting to \$500,000 ? A--Yes.

Q--Have you got there all the information that you gave to the Government at that time upon which you asked for that \$500,000 ? A--I do not know what was given to the Government when that was asked for. You quite appreciate, of course, that three members of the Legislature were on the Commission, two of whom were members of the Government at that time, and they would deal with the matter directly with the Government -- one was a member of the Cabinet, and the others members of the Government.

Q--Coming to the year 1916-17, in which you request appropriations amounting to \$1,000,000 in respect of the Niagara Development ? A--Yes.

Q--Can you tell me what information you gave to the Government at that time, for the \$1,000,000 ?

A--Personally, the only information I know of is the application made by the Commission for expenditures of \$1,000,000, in 1917, on the Queenston-Chippawa Development, and I know of the letters of Mr. Mc Garry, or Sir William Hearst, in reference to the question you asked, but in addition to that I do not know what the Commission itself presented to the Government.

Q--I have here a copy of the request presented to the Government, and this appears to be the only information : "Niagara Power Development : amount specified covers cost of initial construction of canal, to purchase the necessary construction plant and materials."

Now, what do you mean by, "initial construction of canal ?" A--That would be the appropriate work for constructing railways, and any pilot cuts we might put

in during that period; that is the preparatory work for actual operations of canal excavation.

Q--Was that sum based on any actual figures covering actual cost of work during that year ?

A--It is the best of our judgment as to what we would spend during the year.

Q--You would probably spend \$1,000,000 the first year, and ask for \$1,000,000 ? A--We estimated so much for labour, and approximately so much for plant, as near as we could; it is the estimate of the moneys that we anticipated we would spend during the year.

Q--Then we come to the next year, 1917-18; under the head, "Niagara Power Development," in the letter to Mr. Mc Garry of February 5th, enclosing the estimates, "I am directed herewith to enclose estimates for the year 1917-18.

Balance due to complete work orders No.1, 1917, \$1,135,000.
Estimates 1917-18, \$3,000,000. Estimated expenditures 1917-18 \$4,175,000."

And that is all that appears in that particular item. Then there is a following letter of February 23rd 1918, in answer to Mr. Mc Garry's request for further information. Mr. Matthews, I believe, was the Deputy at that time, or Mr. Mc Garry's Secretary ? A--I believe he was the Secretary.

Q--"The amount specified in the estimates covers balance due on work and equipment to November 1st 1917. Estimate of \$3,000,000 is for the years 1917-18, with construction of canal, bridges and other permanent work in connection with the same."

Now, let me see if I understand that. You had asked for \$2,000,000 in the previous year; you had spent about \$2,000,000 ? A--\$2,243,376.

Q--In your request for an appropriation for the following year, you ask the Government for the appropriate sum to

cover that which you had over-expended in the previous year, and \$3,000,000 for the then current year ?

A--No.

Q--What was it, just tell me ? A--The amount there to cover contracts, would be unexpired balances on contracts for machinery and other equipment that had been purchased by the Commission; and the estimated \$3,000,000 some odd dollars, would be estimated as the amount that we would spend on actual operations during the year. We did not ask for the balance, because we understood that it was legally

impossible. In other words, moneys expended in the previous year could not be voted in ^{the} succeeding year.

Q--How was that amount made up, that you over-expended the first year, how did the Commission get it back ? How was it dealt with, because it referred to the appropriations for the year 1917 ? A--This Queenston-Chippawa

Development is part of the Niagara System, it was so considered in the Act of 1917; it is part of the generating plant belonging to the Niagara System. We asked for appropriations for the Niagara System, in 1918, amounting to \$4,366,268, of which we only received as advances, \$2,756,268. We had total appropriations of \$8,541,268 on the Niagara Development, we had received advances of \$6,631,268, and had expended \$6,798,106; in other words, practically all the money advanced as appropriations that year was obtained from the Niagara System advances of which it was a part.

Q--Are you undertaking to change the report of the auditor ? Do you say you used moneys appropriated for one part of the system for another part ?

A-- I am not changing his statement, I am stating that we had advances for the Niagara System of \$6,631,268, and we

expended on the Niagara System, including the Queenston-Chippawa Development \$6,798,106; in other words, practically all monies advanced, and the additional amount easily came within the reserves of the Niagara System, between \$100,000 would be more than the reserve for depreciation.

Q--I want to ask you, you have here the orders given for plant, and contracts outstanding; when did you order the plant necessary for the construction of this work?

A--Well, I commenced ordering, I should say in January 1917.

Q--When you took advantage of the options you then had at the earlier prices prevailing at the time you got the options? A--Yes.

Q--The plant you required for the construction of the enlarged canal was, as I understood your testimony, of the same character you required for the construction of the smaller plant? A--It was suitable for either.

Q--When did you place your order for the plant required for the construction work? Take the general plant required for construction? A--In January 1917, that is, the major part of the plant was ordered in January 1917, that is the electric shovels and things of that kind.

Q--You have told us that the total cost of the plant was approximately \$17,000,000 to \$18,000,000 up to the date of completion? A--Yes.

Q--How much of that was purchased in 1917?

A--I cannot say offhand; I can get it.

Q--Was the major part of it purchased in 1917?

A--No, just the shovels, and plant of that character, which enters into the excavation of material, which includes 80 miles of track for the railway; all the building that we did at a later date includes the shop equipment, electric locomotives, and other locomotives, that were

purchased, as well as stores plant. These items would amount to several million dollars. It comprises a large number of items, not only the construction plant, such as shovels and things of that kind, but the compressor house and compressors therein, electrical stations with rotary converters for operating the electric railway, and 80 miles of track.

COMMISSIONER HANEY: And timber for trestles ?

A--Yes, timber for trestles, and all sorts of things of that kind.

HON. MR. ROWELL: How did ^{the} expenditures run from year to year ? A--I would have to refer to the books to get you that information . Do you want it ?

Q--Yes, you can get us that information.

THE CHAIRMAN: Mr. Gaby, were these items you just enumerated purchased in 1917 ?

A--It was purchased in parts as we went along, but the large item that would enter into the railway, as Mr. Hanev will appreciate, is labour of putting the rails and ties down in order to make a railway. That expenditure has to go into the plant; it may cost three times the amount of the material, to place the railway there.

COMMISSIONER HANEY: Your statement will show that information in detail, from year to year, as to the amount purchased ? A--Yes. You might consider these shovels as tools.

HON. MR. ROWELL: That can be looked into. Did you purchase all the plant it was practicable to order, so far as your requirements in construction were concerned, in 1917 ?

A--I did not say so, no; additions were made as the requirements of construction determined.

Q--Did you order all the main construction plant as distinguished from the other things ?

A--You might say we ordered the larger construction tools, such as shovels at that time -- that is my recollection of it.

Q--Then, so far as that aspect is concerned, you are not affected by any increase in prices ?

A--Oh no, that is carried on there, as far as costs are concerned.

COMMISSIONER R.A.ROSS: In ordering these goods you would have to consider it would take some time to construct ? A--It takes anywhere from one year to 15 months to construct one of those shovels.

Q--And if you had ordered the entire plant for the whole construction, you would have had to pay carrying charges, and everything else ? A--We would have had excessive interest charges during that time, waiting on the shovels, and tools. It would have been a waste of money to have done it.

THE CHAIRMAN: Had you, at that time, a working plan showing how the work undertaken would be done at certain times ? A--I doubt whether we had at that particular time. We had studies made of it, and schedules under which we would operate, but as a combined scheme, laid out in detail, I doubt if we had one, other than that the matter was under study, and things were changing rapidly.

Q--When did you have such a schedule ?

A--I would say later on, when we actually started the work. We would have a tentative schedule, but later on, about 1918, we would have a general schedule of operations.

Q--Up to the date of completion ?

A--Those schedules would be changed from time to time in order to take care of the requirements of the work; for instance, a complete new schedule was adopted to complete the work by November 1st, in 1920, and an intensive schedule, and new schedule was adopted in 1920 to carry on

operations in 1920-21. That was changed finally from November to September first, when the new dredging outfit was rented.

HON. MR. ROWELL: Then, I find in your request the following year that is for the year 1918-19, an amount included in your general request for appropriations, sent to Mr. Mc Garry, with regard to the Queenston-Chippawa Development \$6,000,000 ? A--Yes.

Q--And, in the letter accompanying, I find this statement : "Queenston-Chippawa Development: the amount specified covers estimates on account of capital expenditure in connection with the development of the canal, turbines, and generators, for the year 1918-19." And that appears to be your estimate ? A--That is our estimate.

Q--And that is the only information I see that accompanied the estimate, apparently, at that time ?

A--You must appreciate that those estimates are usually made in the beginning of the year; and that was going on each year up until 1921. We did not know that the cost of labour would increase from 20 to 30 per cent, nor did we know of other increases over which we had no control, in determining what those appropriations were to cover.

Q--This item of \$6,000,000 covers development of the canal, turbines, and generators. What data did you have before you when you decided on the \$6,000,000 ?

A--We would have the general information as to how the work was being carried on from month to month, and we would estimate as near as we possibly could what our schedule would be. We had contracts that had been let by the Commission for certain plant and equipment, and had to provide for the unexpired balances, or Bills Payable with regard to those various contracts.

Q--Did not the report to the Commission give them the

details of how that \$6,000,000 was made up ?

A--Other than those were discussed with the Commission as to how they were arrived at.

Q--You would have the data on your file, would you not, showing how you arrived at the \$6,000,000 ?

A--In a general way, yes.

Q--Will you bring that information with you, this afternoon ? You haven't it here ? A--No. I may not be able to get it together this afternoon.

Q--Then, take the year 1920, the request included in the general estimate, Queenston-Chippawa Development \$10,500,000 ? A--You will find that the Act was changed in that year; the Act had previously debarred us from asking for additional appropriations as the exigencies of the work required, or as we required to carry on the work, and our total requisition for appropriations in 1920 amounted to \$14,500,000.

Q--I am now dealing with this first estimate presented to the Government, it is for construction and extension of the following system, and for Provincial expenditures during the fiscal year 1919-20. The system is set out in detail, and the Queenston-Chippawa Development is put down at \$10,500,000. Then, in the explanation, I find this : "Queenston-Chippawa Development, total \$10,500,000. This covers necessary expenditure on account of the completion of the canal and the purchasing of equipment including turbines and generators." A--Yes.

Q--There again you would have the data upon which you arrived at the \$10,500,000, would you not ?

A--Yes.

Q--Perhaps you will be able to tell me whether you furnished that data to the Commission, or whether they inquired about it ? A--They discussed it in a general way.

Q--Who determined the amount of the annual expenditure each year ? A--I used to report to the Commission, and make my recommendations.

Q--Were these reports in writing ? A--They would usually be in the form of a recommendation, as it went to the Government, as a rule. Sometimes additional information, such as showing the actual amount expended on the work up to a certain period, would be indicated, that is, a report as to what we expected to expend during the year.

Q--I see that a further letter was sent the next day, which adds a little information : "Queenston-Chippawa Development, \$10,500,000, this covers the expenditures in connection with headworks, canal, generating station, and payments on turbines, generators, and other equipment ordered, and to be ordered during the present year."

Now your report, as I understand your testimony, to the Commission, would be in the form of these prepared estimates ? A--As a rule, yes. Additional data might be attached to that showing the amounts that it was expected would be paid, and they would have before them also the progress reports that I have from month to month as to how the work is proceeding, and they would also have the accountant's statement of expenditures.

Q--Then, if you would look up and see if you have the data upon which that is based.

Then, during that same year, you came back for another vote, did you not ? A--Yes, for additional \$4,000,000, making \$14,500,000.

Q--Was that \$4,000,000 in the form of a supplementary estimate ? A--I am not sure, I think part of it was in a special warrant; three additional items in 1920; my file does not show the details here.

Q--I think probably the whole of the \$4,000,000 went

through on special warrants; I am instructed that is so.

A--I think that probably would be correct.

Q--You estimated \$10,500,000, and when you got on with the work during the year, or towards the Fall of the year, you made requisition for amounts aggregating something in excess of \$4,000,000 ? A--Yes.

Q--What was the occasion of that ?

A--We had exceeded our appropriations, and the work was going on, and in view of the necessity of paying certain expenditures, we asked for the additional appropriation to do so.

Q--You were proceeding more rapidly than you had anticipated you would when you made the estimate of \$10,500,000 ?

A--Not only that, but the costs of labour and material in the meantime had increased, and we might have made expenditures on equipment, or plant, in excess of what we anticipated when we asked for the first appropriation.

Q--You should have a statement how you arrived at these figures, in the same way as for the other appropriations ? A--I doubt whether we would, special warrants are issued, and are usually made up by the accountants.

Q--It would be a requisition from you ?

A--No doubt that is the case. When expenditures are going through from month to month, we estimate as near as we can the money required, and when we ask for special appropriations to cover those estimates, they may be confirmed by giving details in connection with it.

Q--Let us take the situation you have with regard to the \$10,500,000; you are going on with the work, and find that you have not sufficient money for the work that you are doing during that summer, do you make no record of that?

A--The accountant would first make a report to the Commission in connection with it, asking for additional

appropriations. If the expenditures amount to an amount in excess of the estimate for a month, for instance, the accountant would ask for an interim special warrant to cover that, and at the end of the year it would be obvious to the Commission that additional appropriations were necessary, an analysis of the situation would be made, and as near as possible, the amount of money required to complete the payment of expenditures for that year would be made, as near as we could. In addition to that, of course, there are things that we cannot foresee, for instance, in the year 1920, after the year had closed, there was over \$640,857 of transfers from one part of the system to another, which did not reduce the actual expenditure for that year; the amount was transferred from stores and equipment, from the Niagara System rental of plant, the garage service, and other things, that is, it would be necessary to expend in connection with this work, money for stores that had been purchased or required for some other work. For instance, we would have a general stores account in which we would have considerable equipment that was bought for general stores, and when the year's balance is made up, there would be transfers made from these stores into the capital account.

Q--You were charged with stores you got during the year ?

A--Yes, but it would not change the amount of the appropriations, it would simply be transferred to some other appropriation, or to some other part of the system, and the expenditure would be reduced by that amount on one part of the system, and increased a similar amount on some other part of the system; it was simply a transfer of a book nature from one to the other. That is necessary in our business in view of the fact we have two sets of books; it is not the same as the ordinary department where it is

"cash in and cash-out."

Q--Tell me this, Mr. Gaby as Chief Engineer in charge, did you feel it incumbent on you to exercise any supervision over the work to see that the estimates were not exceeded, or did you simply go ahead and finish up the work that had been planned for the year, leaving the office to take charge of the actual expenditures ? A--You can say, Mr. Rowell, that these appropriations are our best estimate of how we are going on, or as to what expenditures we will make in our annual round estimate; what we ask for does not apply to any particular schedule of operations, but it is the amount we expect will be required for the work on our system; that work may change, it may slow up, or go ahead faster, as the exigencies require; or there may be a change of from 20 to 40 per cent in wages. Those are things we do not know of at the time we prepare the estimates. These estimates are prepared some 18 months ahead; in other words, we are preparing the estimates this month for the year 1924, although we are only expending money in 1923.

Q--You have missed the point; I ask why you exceeded the expenditures; was it simply a matter of domestic procedure under a kind of working agreement ?

A--I think it is a little better than that, because you say that these appropriations are prepared on a particular schedule. I do not know that they are prepared on a particular schedule, but they are prepared as being our best estimate of what we will expend on certain anticipated operations during the year. There may be changes in the meantime that will materially change these estimates.

Q--Take it as you have stated, you have an appropriation available for the year, do you consider it any part of your duty as Chief Engineer to see that the work is so conducted as to be kept within the expenditure, or do you consider it

your duty as Chief Engineer to see that the work is carried out as planned, leaving^{it} to the Secretary of the Commission to communicate with the Government in order to get the additional funds required? A--No, all matters of expenditures are brought to my attention monthly with regard to different parts of the work, and if the expenditures exceed the appropriations, I am informed by the Accounting Department of that fact. It is then my duty to prepare a report dealing with the necessity of going on with the work and what is necessary to be spent on the work, as near as I can, for the balance of the year.

Q--Do you proceed on the assumption that the Government will provide whatever sum is necessary in order to carry on the work in the manner in which you are conducting it?

A--If it is within the necessity of the work, I should say yes, if it is within the estimates of the work, that is, the general estimate for the total cost of the construction of the work.

Q--Each year, you have been exceeding the cost.

A--Estimates and appropriations are two different things. I am now talking of the \$24,000,000 to \$25,000,000; my instructions were to go on and proceed with the construction of the work, and to keep as far as it was humanly possible, within the estimates. Exigencies will arise over which the Commission, or no one else has control, as far as increases are concerned. The appropriation is an estimate of the moneys required during the particular year, that is, the total estimate.

Q--I do not want to get two things confused, because they are different. I am dealing now with the appropriation, the amount you estimated you would require for any given year, for the work -- I am dealing only with that for the time being, and you have that appropriation from which you can

draw on to meet the expenditures. What I asked you was this; you saw, from the monthly returns that came in, that on the basis on which you were proceeding with the work you would go substantially beyond that amount?

A--Yes.

Q--Then, did you consider that the Government should provide that money and that you could go on with the work depending on the Government putting up the money?

A--If it was in the interest of the work, yes, and the Chairman would report to the Government that it was necessary to go on with the work, and he would ask for additional appropriations.

Q--Now, in whose discretion was it to determine that?

A--The Commission.

Q--Upon your report? A--Yes.

Q--And it was submitted to the Government?

A--Through the Chairman of the Commission.

Q--Do you say it was the duty of the Government to provide such sum as the Commission might determine to be necessary? A--I don't know that it was the duty,-- they did.

Q--The other point you mentioned was that your instructions authorized you to proceed with the work, so long as you kept within the lines of the general estimates?

A--Yes.

Q--Which had been estimated as the cost? A--Yes.

Q--When did you get instructions from the Commission that you were entitled to exceed the estimate of \$24,000,000 to \$ 25,000,000 which had been approved by the Commission for this work? A--I don't know as I can name any particular date, unless it is specifically mentioned in the Minutes.

Q--My attention has not been drawn to any, up to date?

A--I would receive those instructions. The Commission were thoroughly familiar from month to month, with what was going on, and they approved of the changes from time to time, they know of the contracts, they knew of the increased cost of material, they know of the increased labour cost, and they knew what those items meant as regards an increase in the cost of development.

Q--Well now you have given us one illustration, Mr. Gaby, in your testimony, of express instructions from the Commission, and of you passing them on to Mr. Acres, the Engineer in charge, that was in connection with the relining of the canal. What I want to get at is this; did you receive similar instructions, or direct instructions at all in connection with the enlargement of these estimates?

A--Is there anything in writing?

Q--If there is anything in writing, or a verbal statement?

A--Those matters are dealt with in this way; reports are submitted to the Commission, the Commission approves of them at the time, giving authority to deal with the matter. I receive a copy of the Minutes, or get my instructions verbally from the Commission at the time.

Q--Can you turn up for me any instructions, either in the form of a report of the Commission, work order, or anything else dealing with authorizing you to proceed with the work, beyond that estimate? A--Not in those exact words, no.

Q--In any form? A--It goes through, in hundreds of cases, where we ^{are} authorized to place orders for materials, where we are authorized to increase the rates for labour, and things of that kind. I do not think there is any specific instruction where it is all summed up, excepting in the cases of the individual reports that are submitted to the Commission, showing our estimates for future work, such as the Kerbaugh report of 1920, the Cooper reports, those

are the only ones I know of.

Q--If you have any other express instructions similar to the ones you have shown, I should like to have them. You say you understood the Board approved? A--Yes, I would have instructions with regard to each individual case, where the Board approved of the expenditure. Materials, and labour rates, would be passed on in the same way.

Q--If you can find any other instructions of a somewhat similar character, I wish you would turn them up. I do not find in the Minutes, so far as I have been able to look at them, where there is any express authorization from time to time to purchase certain materials, or supplies in connection with certain work. A--You will find that we increased the labour rates.

Q--Yes, you increased the labour rates.

A--And that would increase the cost of the work.

Q--That is true. What I want you to tell me, and I do not want to repeat it too often, is whether there is in writing any document where you report to the Commission that the original estimates were going to be substantially exceeded, and where you got instructions from the Commission to go ahead on the larger scale of expenditure. If there is not any report in writing, that is all there is about it; I just want to know whether there is any report in writing dealing with it? A--There are only three instances in which the plant was changed, that is, in the original estimate of 1917, when we commenced operations, and changed the lining of the canal, the canal was increased to 10,000 second feet, and the lining increased to 15,000 to 18,000 depending on the quality of the work. Those are specific instructions with regard to the change in design of that canal. With regard to the increased cost due to increased rates of labour, and things of that kind, there was no necessity for a report of that kind, because it was not a

change in the character of the canal.

Q --I do not want to argue, I want to know if there is in writing any document giving you instructions from the Commission; if there is, hunt it up. I want to know if there is any report, in writing, made by you to the Commission, at any stage, that the estimates would be substantially exceeded, that is, the original estimate of \$24,000,000 to \$25,000,000, on the enlarged canal?

A--Yes, there are such reports.

Q--And you got instructions from the Commission. Will you bring them in? A--Yes. I do not want you to misunderstand me; these are not estimates in toto. I would make a report with regard to a certain increase in the rates of pay, and it would increase the cost of the work so much, and certain others so much, and so on.

Q--Just bring them in and let us see what they are.

A--It will take some time to look those up, Mr. Rowell.

THE CHAIRMAN: We will adjourn until 2.35 this afternoon.

Proceedings stand adjourned at 1.05 p.m. Tuesday, March 27th, 1923, until 2.35 p.m.

(Page 4545 follows)

AFTERNOON SESSIONTUESDAY, 27th MARCH, 1923.FREDERICK A. GABY Examination resumed by

HON. MR. ROWELL.

Q--Mr. Gaby, when we adjourned at luncheon we were dealing with the request to the Government for Treasury Board Warrants to cover additional expenditure in the year 1920. Were you able to find whether you prepared any memorandum or estimate, which you submitted to the Board at that time, upon which these requests were based ?

A--No, I have not been able to go through the files at all yet.

Q--Well; then, we will pass from that. Then, coming to the next, 1920-1921. I see the first estimate you submitted to the Government in 1920-1921 is contained in the letter of the Acting Chairman, Mr. Lucas, to the Prime Minister, dated January the 20th, which appears to be an estimate from November 1st, 1920, to June 30th, 1921, less amount already voted by the Legislature for the period November 1st, 1920, to March 31st, 1921 ? A--Yes.

Q--Well, now, when was the vote given for the period November 1st, 1920, to March 31st, 1921; that had been given in the previous year, had it not?

A--The previous year, I should say.

Q--Well, had you not got a vote for the previous year for the whole year ? A--I don't think so, Mr. Rowell, I cannot definitely state, but I think that was just for part of the year, the first five months.

Q--On May 25th, 1920, the request for a vote of \$5,000,000 was made, in reference to the estimates of the Commission for the first five months of the next fiscal year, November 1st, 1920, to March 31st, 1921, inclusive ? A--Yes.

Q--And I see that under the Queenston-Chippawa Development is the amount of \$5,000,000 ? A--Yes.

Q-- With this explanation:

"This covers work on the construction of the intake at Chippawa, earth and rock excavation on the canal, the lining of the canal, construction of the headworks, powerhouse foundation and building, construction of bridges and road diversions, supply of cement, steel, etc. and bridge material; payments on the electrical and turbine equipment, etc."

Now, did you not, during the session of 1920, take a vote for more than that \$5,000,000 , I thought you did ?

A--No, I don't think so. The next one appears January 21st, 1921, is it not ?

Q--Well, then, I see that in this letter of January 20th, 1921, which is written by Mr. Lucas to the Prime Minister, it is for the period from November 1st, 1920, to June 30th, 1921, less amount already voted by the Legislature for the period from November 1st, 1920, to March 31st, 1921. In other words, instead of a five months' appropriation you were asking a sum to cover eight months less the amount already voted ?

A--What is the date of that letter ?

Q--January 20th, from Mr. Lucas ? A--I think that was revised and sent forward as a letter of January 21st.

Q--Well, it is in the Government file here as having been sent. Do you think that letter did not go on ?

A--It may have gone on and been changed. The letter from Mr. Wallis dated January 21st, 1921, states:

"After consultation with the Assistant Treasurer and the Auditor, it appears that, to meet the financial requirements of the Commission, vote 106 should be increased by Treasury Board Warrant by a sum required to be paid over to the Commission by the 31st of March."

Q--This is on the Government files, Mr. Gaby, as having been sent to the Government ? A--It may have been, and changed again.

Q--Well, I notice here you state ⁱⁿ this letter :

"The reason for the increased amount for Chippawa Development is the urgency for the completion of this work at the earliest possible date and the increased equipment and force required to complete the work in the early fall of 1921."

That refers to the same matter that you mentioned this morning, that you were endeavouring to complete by the 1st of September ? A--Yes.

Q--Then you say:

"The moneys expended in connection with the Chippawa Development will be substantially lessened after July, 1921, as the work will then be approaching completion, as it is expected that operation will commence sometime in September, 1921."

Then:

"In the cases where the appropriation is exhausted, as shown by the attached statement, I beg to report that it is necessary and expedient that the work for which such appropriations were made, should be proceeded with and that the additional sums as shown in the attached statement, are required for the purpose of carrying on the work and I am today authorized by the Commission, as Acting Chairman, to so report to the Lieut-Governor-in-Council.

This appropriation and report is made in pursuance of Section 4 of the Act to Amend the Power Commission Act, 1920."

That was the amendment which gave the Lieut-Governor power to issue Treasury Warrants for additional sums ? A--Yes.

Q--Then I notice:

"I beg to call your attention to the necessity of passing the Treasury Board Order before the House meets."

THE CHAIRMAN: I think that is a rule, Mr. Rowell, that they have no power to pass while the House is in session.

HON. MR. ROWELL: Q--The amount asked for by the Special Warrant was \$16,000,000; the last appropriation was \$5,000,000, and you asked for \$16,000,000 more, or a total of 21 millions, that is correct, is it, Mr. Gaby? A--I think there is some error in that. I think we asked to revise it up to March 31st, to conform with the original vote 106, and letter of January the 21st sent along the correct amount.

Q--Yes. In reading through this subsequent correspondence, possibly this is the explanation, Mr. Gaby,-- you will correct me if I am wrong. On January 20th you asked for this Treasury Warrant.

THE CHAIRMAN: January 20th, Mr. Rowell?

HON. MR. ROWELL: January 20th, 1921, you asked a Treasury Warrant for \$16,000,000, which, with the \$5,000,000 already voted, would cover the expenditure from November 1st, 1920, to June 30th, 1921? A--Yes.

Q--Then you revised that so as to only ask for an appropriation, by Treasury Warrant, to cover the estimated increase of expenditure up to March 31st, 1921?

A--That is it, yes.

Q--And, on those revised figures, you asked for \$7,500,000? A--That is it.

Q--To cover the work of that period. That is, your original estimate passed in the session of 1920, for that 5-month period, was \$5,000,000. Your estimate at this time for the 5-month period was twelve and a half million dollars?

A--Yes.

Q--And you asked Treasury Board Warrant to cover the other seven and a half million dollars. Can you tell me how there came to be such a wide discrepancy between these two estimates ? A--One is for June, the other was for March. You are speaking now of the \$16,000,000 and the \$12,000,000 ?

Q--No, I am speaking of the \$5,000,000 and the twelve and a half millions ?

A--Oh, that was our best judgment of the year previous, that we would require only \$5,000,000 for the period between November 1st, and March 31st.

Q--Then on January the 27th, 1921, that is eight days afterwards, you submitted a further estimate:

"The Commission herewith submit the supplementary estimates from April 1st up to October 31st, 1921, as given in the attached statement."

And then when we turn to the Queenston-Chippawa Development we find \$14,200,000. That would be for the remaining seven months of the year ? A--Yes.

Q--Then, the particulars you give here read as follows:

"Queenston-Chippawa Development, \$14,200,000.
Hydraulic construction, \$12,500,000, covering cost of excavation on the canal and Chippawa River, including headworks, gatehouse, penstocks, and powerhouse, together with necessary equipment for installation of three turbines and accessories . Also includes purchase of such additional constructing plant as may be necessary to complete the work, and material such as cement, lumber, stores, etc."

Then:

"Electrical generation \$1,700,000. This covers progress on work authorized for the purchase and installation of five electrical generating units."

"together with the necessary switching for 12,000 V. buses, reactors, oil circuit breakers and building superstructure."

I find another letter of February the 12th, 1921, from Mr. Wallis to Mr. Gilmour. He would be the Treasurer of the Hydr-Electric Power Commission ? A--Yes.

Q--The letter is in reference to these estimates :

"I telephoned you this morning about this matter and have since conferred with the Treasury and the Audit Office. The estimates of the Commission, as passed last session down to March 31st, provided for the sum of \$7,590,000. To this was added by Special Warrant the sum of \$8,725,000. Your estimate for the balance of the fiscal year provides for the expenditure of \$20,592,700. As it is necessary to vote the amounts provided by Special Warrant in the House, the sum of \$8,725,000 thus provided will be incorporated with the sum of \$20,592,700 already mentioned, making altogether \$29,317,000 to be voted in the supplementary estimate.

As I explained to you, it is very necessary that there should be a detailed statement covering each item showing the progress made with the work, the amount expended and the probable expenditure, also the object of the development and what is intended to be accomplished. In short, sufficient information should be given to enable the Government to answer any likely questions and to enable the House to fully understand the reasons and the advantages of the possible cost of each undertaking, just as the Engineer himself and the Commission will understand the matter.

I have already discussed this phase of the matter with Mr. Gaby and Mr. Pope and have pointed out

"the necessity for providing this information and the Premier hopes it will be available in good shape before the matter comes before the House."

Mr. Wallis had taken up with you, had he not, prior to the date of this letter, the question of furnishing the Prime Minister with full information on those items? A--Yes, he explained what he wanted, and we commenced to get the information out in accordance with his explanation.

Q--Now, then, it was following that that you prepared that lengthy statement? A--Did you read the postscript?

Q--"P.S. I should add that the explanation of the various items should cover the expenditure for the whole year, including the amount already voted in the Main Estimates last session so that the House may be seized of the facts in each case".

I see then in the statement that was subsequently sent, entitled Details of estimated capital expenditure, 1920-1921, appears the Queenston-Chippawa Development, \$26,700,000. Under the head of "Hydraulic Construction" is \$22,800,000.

A--That is 1922, is it not, Mr. Rowell?

Q--That is November 1st, 1920, to October 31st, 1921?

Q--No, but is that statement you are reading from not in the 1922 estimate?

Q--No, Mr. Gaby. You see, it includes what you got by Treasury Warrant, as pointed out in Mr. Wallis' letter. Then I see the Queenston-Chippawa Development is \$26,700,000 composed of two items, of which particulars are given, Hydraulic Construction \$22,800,000 and Electrical Generation \$3,900,000? A--I think, in addition to that, Mr. Rowell, the statement I handed you yesterday was also sent, as an attached statement, showing the amounts expended to the certain date, and the estimate for the year, and also the estimates for 1922.

Q--Well, then, I find under the head of "Niagara System"

Queenston- Chippawa transformation \$2,450,000, covers five banks of transformers totalling \$20,000 K.V.A. capacity from 12,000 to 110,000 volts, etc. etc. Now, what was that intended to cover, Mr. Gaby? A--That covers the transformer station end of it, belonging to the Niagara System.

THE CHAIRMAN: Q--Forms no part of the Queenston-Chippawa Development? A--Forms no part of the Development itself as estimated upon.

HON. MR. ROWELL: It is quite clear that this was never included in any estimates then? A--No.

Q--Well, then, you say that in addition to that the statement you furnished yesterday, which was put in as Exhibit 42 was also furnished to the Prime Minister?

A--That is, to the best of my recollection, yes, or to Col. Carmichael, either one or the other.

Q--Which showed that if you added to the expenditure already made the estimates for the year it gave you a total of between \$54,000,000 and 55,000,000? A--Yes.

Q--Now, then, have you got the data upon which you made these requests for appropriations at this time?

A--I haven't it with me but we have it.

Q--Then did you exceed those appropriations in the year 1921? A--Yes.

Q--You exceeded this appropriation, and I see, on October the 13th, 1921, you applied for another Treasury Board Warrant; that is contained in a letter from the Chairman to Mr. Drury dated October the 13th:

"I am instructed by the Commission to forward to you a copy of the revised estimates of the Commission for moneys required for the fiscal year ending October 31st, 1921.

I am enclosing the following statement, namely,

1. A statement headed "Additional Monetary

"Requirements for 1920-21" showing the amounts voted under Vote 201 and Vote 106, and a revised estimate for 1921 of \$39,876,357.61 increasing the total amount voted by an amount of \$2,938,657.61."

Now, of this additional amount, how much related to the Chippawa Development ? A--\$30,680,674.52.

Q--I see the revised estimate put in here for the Chippawa Development is \$31,380,674.50 ?

A--Is that not \$30,680,674.52 ?

Q--No, not on this statement, Queenston-Chippawa Development \$31,380,674.52. It is headed Monetary Requirements 1920-21 ? A--There is another statement headed State^{ment} Showing Revised Estimates for the year 1920-21, and Expenditure to October 26th, 1921, including interest and overhead construction expenses. The latter figure, \$30,680,000 corresponds with, I think, the letter of the Chairman. I may be wrong there, but I think they may have been revised.

COMMISSIONER J. A. ROSS: Q--Did one include the interest, Mr. Gaby, and the other not ?

A--No, I think, Mr. Ross, they both would include interest. It is just over-expenditure in this case.

Q--There are these two figures, I find them both.

A--No, I think that was just an adjustment made at a later date, and the final one was \$30,680,000 odd.

HON. MR. ROWELL: Q--Well, you had, up to that time, received votes of the House for \$26,700,000 ?

A--\$26,700,000, yes.

Q--And your estimate of the amount required to bring you up to the 31st October, 1921, was, you say, as revised, \$30,680,674. ? A--Yes.

Q--That is in excess of the vote of \$3,980,674.52 ?

A--I guess that is right; that included interest to the

amount of \$2,461,032.15.

Q--Well, notwithstanding the change in the estimate embodied in the supplementary estimate, of an ^{additional} \$21,700,000, when you came to the month of October, 1921, you found that you required, in order to pay the total costs up to the end of October, plus the proper allowance of interest, an additional sum of, approximately, \$4,000,000, \$3,980,000 ? A--Yes, approximately that.

Q--And, in respect of that you requested the Government to issue Treasury Board Warrants, and those Warrants were issued to cover that expenditure ? A--Yes.

Q--I suppose you have nothing to add at the present time in reference to the reason why those estimates were exceeded beyond what you have already told us ?

A--No, I think that the explanation of Messrs. Stuart & Kerbaugh, with their reasons for the increase in the estimates, will cover the point very fully.

Q--Then we come to the estimates for 1922. During the fall of 1921, in fact when those demands came in in the fall of 1921 for this Treasury Board Warrant of nearly \$4,000,000, the Prime Minister took the matter up, why this big increase in expenditure ? A--Yes.

Q--He seemed to be much disturbed at that time at the figures that were then coming in. Do you remember, Mr. Gaby, that the Prime Minister asked for a conference between the Commission and the Government with reference to this request for an increased appropriation ? A--Yes.

Q--Were you present at the conference ? A--Yes.

Q--I notice that the Prime Minister, in his letter to Mr. Carmichael of November 10th, 1921, referring to this conference, says:

"You will recall our conversation of some three weeks ago in which you pointed out to me the fact

"that the estimates for the first five units of Chippawa were certain to run to a very considerable extent beyond those submitted by you to the House last April. You will further recall the meeting which was arranged between members of the Commission with the Chief Engineer, Mr. Gaby, and the Full Cabinet, in which the entire situation was very fully discussed and a promise was made by the Commission that a full explanation of the increases would be submitted to the Government in the course of a few days."

Do you recall that taking place at that conference ?

A--I do, yes.

Q--The letter continues:

"This explanation has not yet arrived, and as the Government is intensely interested, I would urge that you, as representing the Government on the Commission, should immediately take the matter up and see that this is done.

I need not point out to you the seriousness of the situation. You were assured by the officials of the Commission, and in turn assured the House and the country, some seven months ago, that the estimates then submitted to the House for their approval were ample for the completion of the first five units."

Do you agree with that, that was the representation made to the Government in 1921 ? A--This statement was submitted, and showed that.

Q--Showed that to be the case ? A--Showed that we expected to complete it within those estimates, using Stuart & Kerbaugh's estimate as a basis.

Q--Well, we have gone over that quite fully.

"During the period which has elapsed since the voting of these estimates, conditions generally have been

"such as would lead to the reasonable expectation of a reduction in cost rather than an increase over estimates at that time."

Q--Now, is it not a fact that in the fall of 1921 you had passed the peak, before that you had passed the peak in both labour and material costs, and in 1921, prices were falling ? A--Yes, we had a reduction in August of 1921 which was taken into account in the preparation of our estimates.

Q--In labour, but the drop had taken place in material prices before that ? A--I would not say that, because cement had gone up considerably, 80 cents a barrel; sand had gone up, and other materials had either gone up, or varied very little. In a great majority of cases, the material for that plant had been ordered at the peak of prices, previous to any reduction.

Q--The greater part of the material had been ordered on the peak prices ? A--Yes.

Q--Well, what date would you say that would be ?

A--The latter part of 1920 and the early part of 1921.

Q--My recollection, Mr. Gaby, is -- see if your view is in accordance with it -- that in another proceeding, where evidence of prices was given, the evidence was quite clear that the peak in labour and material prices was reached some time in 1920, and that 1921 showed a drop from that peak, getting down more in comparison with 1919,

A--Well, as a matter of fact, cement prices did increase by something like 80 cents a barrel; sand prices increased, and other materials increased, and others were reduced, but the greater quantity, in fact, practically all the material was purchased at the peak of prices, such as lumber, and material of that kind.

Q--Well, then, the Premier's letter continues:

"The fact that not only has this not been the case, but that in spite of these conditions, the estimates have been increased to an amazing extent is, to put it very mildly, a matter of great alarm to the Government and constitutes a condition which we cannot ignore. I trust that you will take this matter up energetically and see that reasons for this condition are immediately place before the Government."

Now, did Col. Carmichael bring that letter to the attention of the Board, and did it come to your attention, Mr. Gaby ?

A--I believe it did, yes.

Q--So that you had the Prime Minister's request and complaint before you ? A--Yes.

(Page 4560 follows)

Q--Then did you prepare a statement at that time?

A--No, the Commission took its own ways and means of having that question answered, and they instructed that the consulting engineers prepare a statement and they did.

Q--The Prime Minister was asking for the Commission's own explanation. I want to deal now with your own part as chief engineer of the Commission. Were you asked by the Commission to prepare any statement in answer to the Prime Minister's request? A--No.

Q--You were not. Did you in fact prepare any statement?

A--No.

Q--Did you yourself as chief engineer inquire into the cause of the increase and reach a conclusion yourself on why the estimates of the previous year had been exceeded by approximately ten million? A--I went into detail during the summer and spring, or at least from June, 1921 until October, 1922, went into the estimates in detail and explained it, but I prepared no detailed report myself personally. I had reports from the engineers in connection with it but I prepared no report to the Commission with my explanation of the detail, that was entirely left to the consulting engineers to prepare such a report on their estimate.

Q--Then you were not asked by the Commission to make any report and you made no report to the Commission at this time in connection with the Prime Minister's request?

A--No, not in connection with the reasons for the increased costs. That was left to the consulting engineer.

Q--Then I notice in the minutes -- we had it before -- that a report was presented, and on January 11th there is this minute: a statement setting out details in connection with the additional cost of the Chippawa-Queenston development was presented, noted, and ordered to stand pending further examination and explanation by the Commission.

It was decided that all information of this character should at all times be submitted to the Board before being sent on to the Government. Were you present at that particular meeting? A--I presume I was. Yes, I should say so

Q--Now what was the statement there referred to?

A--That statement I handed you of January 11th, 1922.

It is an Exhibit but I do not remember the number.

Q--This was a statement prepared by you as chief engineer and handed to the Board. It is headed: "Memorandum to Sir Adam Beck, estimates fiscal year 1922. It will be Exhibit 45.

EXHIBIT NO. 45: Filed by : Memo of estimates fiscal
: HON. MR. ROWELL: year 1922, from chf.
: 27 Mar.1923 : engr. to chrm.H.E.C.

Now under the head of Niagara Development, this appears: - To cover the completion of the Queenston-Chippawa development for five units, including intake, dredging of river section, power house, hydraulic and electrical equipment including bus bars, including engineering on proposed extension, also betterments to Ontario Power Company, \$8,000,000. Why have you changed the designation from the Queenston-Chippawa development to the Niagara Development in this estimate? A--I don't know any specific reason. There is no real reason that I know of excepting that it probably conformed more closely with the heading of the Act, that is all.

Q--I notice in your prior estimates you have an item Queenston-Chippawa development, and then you have the Niagara system? A--Yes.

Q--Under this you put all this in under the head of Niagara System? A--Niagara System.

Q--Was there any reason for changing at this time?

A--No particular reason, no. There is no change as far as the item of the Niagara Development is concerned; just simply it is part of the Niagara System and a different way of reporting on it, putting it all under Niagara system. I think you will find it was under Niagara system before.

THE CHAIRMAN : Was it all the same?

A--Yes, Niagara Development, Queenston-Chippawa Development, just the same, there is no difference at all in the items.

HON. MR. ROWELL : I want to draw your attention to it, Mr. Gaby, because it may not be of any significance, but it may. A--It is the same thing in the estimate of 1921 to October 1st, 1922, Queenston-Chippawa development again.

Q--Yes, it is the Queenston-Chippawa Development, and the amount is put in and then the Niagara System is a separate item and the amount is put in. Now what I want to draw your attention to, Mr. Gaby, and to have your explanation of, is this: you had in 1921 submitted to the Government an estimate of approximately 55 millions as being the estimated total amount required to complete the Queenston-Chippawa development; and during all the years up to and inclusive of 1921 the heading of the item had been Queenston and Chippawa Development? A--It still is that in 1922.

Q--Not in this memorandum. A--It does not happen to be in that particular memorandum but you look at the estimates of 1922, the succeeding estimates and it is just the same.

Q--This memorandum, which was submitted to the Board, and which was not sent on to the Government, classes this thing as part of the Niagara system, and this item is included with others as part of the Niagara Development. A--There is no particular significance in it. If you look to the estimate as of November 1st, 1921 to October 31st, 1922, which is a

revised statement forwarded to the Government, you will notice Niagara system and the first item under that is Queenston-Chippawa development. There is no reason for it at all, just simply the name was put down there as Niagara Development instead of Queenston-Chippawa Development.

Q--Why then do you include under this first item of eight millions the betterments to the Ontario Power Company, if you were treating it as Queenston-Chippawa Development separately?

A--I really do not know at the present, excepting that we probably at that time in submitting the reports to the Commission, considered all the developments there including the Ontario.

Q--Whatever its significance may be -- it may have some or may have none ? A--It has none as far as I know.

Q--What you did in fact do was to combine the estimated cost of completing the Queenston-Chippawa Development with certain other items? A--In that memorandum, of course that eight million does not complete it.

Q--I am only dealing with what you say here. A--Yes, the eight million does not complete it.

Q--Also the betterments to the Ontario Power Company are all included in the one item of \$8,000,000.

A--Yes.

Q--In other words, you combine Queenston-Chippawa Development with other items having no relation to the Queenston-Chippawa Development. A--In that memorandum.

Q--In this memorandum under the common heading Niagara Development and under a common sum of eight millions of dollars? A--Yes.

Q--Then when you come to discuss it on the following page you put : "Niagara System." Under that heading, the increase of five million on hydraulic construction

for the year 1922 over that of the estimates submitted, is due to the conditions referred to in the memorandum of the consulting engineers Messrs. Kerbaugh & Stuart, and the \$5,500,000 asked for is for the completion of the intake, and the dredging of the Welland River Section, the completion of bridges, the balance on outstanding contracts for turbines and completion of power house substructure and penstocks. That is what in the prior reports and estimates is referred to as the Chippawa and Niagara Development? A--Yes.

Q--Then, of the item of \$4,500,000 estimated to be expended by the end of 1921 on the superstructure of the power house and electrical and generating equipment and switching only \$2,040,000 has been expended leaving a balance of over \$2,840,000 of which \$2,500,000 is appropriated for the year 1922, making a total of 8,000,000 appropriation for the

Queenston-Chippawa Development for the completion of the above works for five units. Now apparently when you come to the explanation here, it takes 8,000,000 for the Queenston-Chippawa only? A--Well, apparently there is nothing in there for the Ontario Power Company.

Q--Then why is that included in the other? A--I cannot at the present moment say why we put on that addition of the Ontario Power Company.

Q--Then can you tell me why the decision was arrived at, at this meeting, that it was decided that information of this character should at all times be submitted to the Board before being sent on to the Government?

A--That I cannot tell you.

Q--You don't know why that note was put in? A--No.

Q-- Then following the letter of the Prime Minister to Col. Carmichael to which I have drawn your attention, is a letter from the Chairman to Col. Carmichael. We will let them deal with that. And then a communication from Col.

Carmichael to the Prime Minister, and then I want to ask you if this letter came to your attention. It is dated November 29th, 1921, Col. Carmichael to the Chairman. I regret that so much time has now been allowed to elapse since this matter was taken up with the Cabinet, and the explanation which was mentioned in correspondence, promised. I think it is now nearly six weeks since the matter was discussed with the Cabinet, and an explanation of the large increase, approximately \$10,000,000, required to complete the first five units, was promised by the Commission to the Government. Part of this money has already been advanced by the Government to the Commission, and the Commission is now requisitioning on the estimate of the fiscal year 1922. I consider it extremely urgent that all the explanations and reasons necessary should be forwarded to the Government without delay, and I regret being compelled to think the matter is not being treated with the consideration its importance warrants. Did that letter come to your attention? Did the Chairman pass that to you? A--I could not say whether it came directly or not.

Q--Then did this letter of the Prime Minister to the Chairman, of December 8th, come to your attention? Early in October last it came to the knowledge of the Government that the expenditures of the Hydro Electric Power Commission on the Chippawa Development were considerably overrunning the estimates which were submitted as final for the five units by the Commission in February last. The situation was of such importance and gave us so much concern, that about the 12th October we asked the Commission to go into the matter with the Cabinet. You attended with a number of your officials and after an exchange of views you undertook, personally to furnish the necessary explanation in the course

of the following week. Do you recall that letter coming to your attention? A--Not officially. I know of the letter yes.

Q--I draw to your attention the above facts and I point out moreover that what the Government has asked and what we were promised is an explanation from yourself as the responsible Head of the Commission as to why the increased expenditure was necessary. I feel that we are entitled to have the information you receive from time to time which in your mind justified the estimates and expenditures of the Commission. This is the more urgent because in February last you authorized an estimate that the completion of the five units would cost \$26,700,000. When the question was raised in the Legislature as to whether this was a final estimate the assurance was given that it would complete the work, yet during the last fiscal year the Commission expended in addition to this amount, \$3,980,674, and it is still making requisitions without any adequate explanation for further sums.

Now, Mr. Gaby, you knew in February 1921, for you had prepared the statements yourself, that the Government was informed that approximately 55 millions would complete the cost? A--Yes.

Q--When did you draw the attention of the Commission to the fact that that representation made to the Government was not being made good and that you were during the year 1921 itself, actually expending some millions of dollars more? A--I would say that some time in June or July the matter first came to our attention that we were not meeting the estimates that were submitted to the Government, and an investigation was commenced at once. That investigation took July, August and September; in September some time, the matter was drawn to the attention of the Commission,

and I believe in October, the early part, a report was written in a general way, giving some idea of the probable cost of the work.

Q--Can you show me any minute or any report that you prepared, to the Board, drawing their attention to that matter? A--Yes, I believe I can.

Q--Have you got it? A--I don't know whether I have or not. It does not appear to be among these papers here, but we have such a report and we can get it in the office. I will bring that along.

Q--You will check that up for me? A--Yes.

Q--Your present recollection is that you did prepare a report for the Commission? A--Yes.

Q--And your present recollection is that you presented it to the Commission at what date? A--The one I have in mind, somewhere in the neighbourhood of the first part of October, 1921; that is the written report, as to the other information.

Q--Tell me what your recollection is as to the subject matter covered by that report? A--It was a report giving the Commission information as to the estimates submitted to the Government and a report on the check of the estimate and an estimate for the completion of the work.

Q--Now so far as I see in the correspondence the matter was not drawn to the attention of the Prime Minister until the request in October for further appropriation? A--No, the conference was before October 13th or before October 12th. The conference was held before October 13th, and the request I understand was made on October 13th, if my memory serves me right.

Q--Then would this be the history of it; you brought the matter to the attention of the Commission some time prior

to October 13th? A--Yes.

Q--Shortly prior to the conference? A--Yes.

Q--Col. Carmichael reported that to the Prime Minister, the Prime Minister asked the conference, and the conference was held as detailed in his letter? A--Well, I would not like to say that is the procedure.

Q--I mean approximately that.

A--The Chairman may have asked for that conference to discuss the matter. That is a point I am not in a position to say. He may have asked for the conference himself to discuss this matter with the Government, having the reports before him and having in mind that it was going to exceed the estimates.

Q--What I would like to get is the particular report you made to the Commission at this time upon which subsequent proceedings were taken?

THE CHAIRMAN : Had the amount of the final estimates been exceeded at the time this meeting was held?

A--I would say it had. I mean at the time we were asking for additional appropriations. The amount of actual expenditure may not have been exceeded. The interest and other charges would bring it up to and exceed the estimates by the end of the year. The actual expenditures had not exceeded up to that time, the amount stated in the estimate. But before the end of the year, in view of the heavy interest charges we had to meet, we might have exceeded it.

HON. MR. ROWELL : Is not this the fact, that quite apart from the work that remained to be done after the 21st October, which amounted to some millions of dollars, that is including the interest and charges up to the 31st October, you were exceeding the 54 or 55 million given the Government by between 3 or 4 million?

A--Yes, about 3 million.

Q--In actual expenditure? A--Yes.

Q--And you did as a fact expend during that fiscal year, over three million dollars more than the estimate given to the Government in the spring as the total cost for completing the work. A--Yes.

Q--Until we get that actual report that you prepared, Mr. Gaby, I don't think there is any object in my asking you anything further on that particular branch? And until you get the information relating to these points on the estimates, that is all I think that I can with advantage ask you now on that branch.

There are a couple of matters you were going to look up, Have you turned up for us now the information that was sent to the municipalities in the autumn of 1916 in reference to the voting on the bylaw? A--Yes, excepting that letter which the young man was sent for, I believe I have, as far as I can find in the files.

Q--Tell us just what you have in your file. A--I have a letter here before me of November 30th, 1916. Do you want me to read it?

Q--First let us get the description of it. It is a letter from the Hydro Electric Power Commission of Ontario signed by you as chief engineer? A--Yes.

Q--Addressed to the different municipalities, is it?

A--To the various municipalities then operating.

Q--Now prior to this apparently a letter had been sent out by you or by the Commission? A--By me or by the Commission.

Q--Dated October 22nd, 1916? A--Yes.

Q--Enclosing a copy of the proposed bylaw? A--Yes.

Q--And that is the letter you are trying to locate?

A--Yes. I believe I have a copy of the bylaw here, but I have not got a copy of the letter. I cannot locate that

letter. Apparently it was a letter transmitting the bylaw.

THE CHAIRMAN : Would it be possible for you to get here the report that you made in that meeting of October so that we can take that up? A--I think so.

Q--Perhaps you can bring that up and you might finish up that part. I understand you have a meeting of the Commission tomorrow morning, so that you could not get on then. If you could have someone bring it up you could finish with it tonight.

HON. MR. ROWELL : Is there anyone you can send for that?

A--Yes. There is a copy of a report dated some time in October to the Commission, by myself, in connection with the estimates of 1920-21, and the revised estimates for 1922.

Q--Now you have not so far been able to locate the letter of October 22nd, but you have the bylaw which was sent out. This bylaw was prepared by the Commission, was it?

A--Prepared by the Legal Department of the Commission.

Q--And sent out to the different municipalities. Then would you mind letting me see the file of correspondence.

A--This is not really correspondence. It is simply a file of several letters from Mr. Hannigan, and papers of that kind.

Q -Then in addition to these two letters, the one of October 22nd that you are going to look up, and the one of November 30th, 1916, what further communications, if any, have you? A--As far as the Commission are concerned, I am not able to find any.

Q--You are not able to find any other communication?

A--Not of the Commission, no.

Q--Do you find any of any other source? A--The only thing I find is from Mr. Hannigan, in which he sends along some information which he had been sending out to the municipalities

and some suggested letters and editorials and things of that kind, and advertisements, but I don't know whether those advertisements ever went in or not.

Q--Would you mind letting me see what they are. They may not be of any importance. A--Those are the votes of the municipalities. And the Bill that went through, was passed, in 1917. And a letter of Mr. Hannigan's.

Q--I see in this letter of November 30th, 1916, you state: On October 26th, a letter was forwarded to you with copy of proposed bylaw, which bylaw is in the form of a question to be submitted to the ratepayers in the various municipalities in the Niagara district which have contracts with the Commission for power. The question reads as follows. And then comes a copy of the bylaw which is put in. Then it speaks of the contracts with the Ontario Power Company and also with the Niagara Company, and then it goes on to speak of the demand for power. Then it says: The Ontario Municipal Association have therefore asked the Commission to forward you a copy of the above bylaw which they are asking you to submit to the ratepayers at the approaching election. The bylaw should be submitted in the form in which it is forwarded. The Commission will arrange to assist the Ontario Municipal Electrical Association in giving your ratepayers such information as may be possible by holding a public meeting prior to the date of voting, at which meeting a representative will be present to explain the various details in connection with the bylaw and the whole question of power for your municipality and other municipalities to be supplied from this proposed development.

Can you tell me what information was furnished pursuant to that promise? A--No, I cannot in detail. I have asked for that information, if we can possibly get it. I presume

it would be general information as to what the Commission were doing and in a general way the character of the development and so forth.

Q--The proposed development and an estimate of its cost?

A--I don't know whether that was submitted or not. I cannot say definitely.

Q--I notice in this suggested material, for an editorial this paragraph; in view of these facts the Ontario Government deemed it advisable to acquire all the remaining water power rights at Niagara Falls. This has been done, and arrangements have been made to divert water from the Chippawa Creek, which is above the Falls, and construct a canal to carry this water to a point near Queenston, where a plant will be constructed having a capacity of between 200,000 and 220,000 H.P., and finally with a view to having an ultimate capacity limited only by the amount of water available for power purposes.

That obviously refers to your first plan of 6500 cubic feet per second? A--Yes.

Q--Then whatever information you gave the municipalities would be such information as you had on December 1916 relating to your then existing plan? A--As far as detailed information is concerned, yes.

Q--You said if inquiry were made you probably could get the information as to what had been furnished to the municipalities. What did you refer to there, where would that information be found? A--What was that again, Mr. Rowell?

Q--You said you might be able to ascertain the information as to what material was furnished to the municipalities by the Commission as promised in your letter, upon making inquiry for it? A--Oh, you mean I might be able to look up

and get that. I have looked the files over to see whether there was anything in writing as to what we supplied to them. We found nothing at all. It would be only a matter of memory as to what did actually take place, from those who were present at those meetings.

Q--What is your recollection as to what did take place in reference to it? A--My recollection is that as meetings were held around the country various engineers of the Commission were authorized to appear at those meetings and explain as far as we knew at the time the purpose of this development.

Q--And your existing plans and estimates?

A--The existing plans and estimates and what we expected for the future.

Q--Then we will mark this letter Exhibit 46 and if you can locate the letter of October 22nd, it can go in as part of the same Exhibit.

EXHIBIT NO. 46: Filed by : Lr. 30th November,
: Hon Mr. Rowell 1916.
: 27 Mar.1923 :

Who were the Ontario Municipal Electric Association?

A--An association of the municipalities.

Q--And at this time what was Mr. Hannigan?

A--He was secretary.

Q--And was he at that time in the pay of the Commission?

A--Not to my knowledge. No, I don't think he was.

THE CHAIRMAN : Is that when Mr. Lyon was president?

A--He was president I think in the early days. Mr. T.L.Church was president, and I think Mr. Allison of Hamilton was president of the Ontario Electrical Association. I think Mr. Lyon in the early days was president for a year

or two, and then he resigned, and was president of the Ontario Hydro Electric Railway Association., He has been on that almost from its inception; practically ever since its inception. Mayor Maguire is president at present.

HON. MR. ROWELL : The Prime Minister, Sir William Hearst in his letter of December, 1916, raised in definite form the question as to whether the work should be done under contract or by the Commission by day labour. Do you recall that? A--Yes.

Q--And on that you made a report? A--We had previous to that time made requests to contractors for tenders on it and I made a report on the 11th January 1917, I think, to the Commission.

Q--You reported against doing it through contractors and in favour of the Commission doing it itself? A--Yes.

Q--Now will you give us your reasons for recommending that the work should be done by Commission rather than by contractors? A--I think they are set out pretty fully in my report, but generally they were due to the fact that we could obtain no contract on a lump sum basis, or no guarantee as to price. It was a contract of cost plus a percentage, on varying amounts. And in view of the fact that it would almost necessitate, to carry on that work, from our investigations, the very largest type of equipment, which no contractor who was then tendering had, it would mean the purchasing of new equipment, special equipment, to carry on that work successfully. That I believe, from actual operations has been demonstrated to our satisfaction at any rate, that it would have been practically impossible to have carried on that work with the ordinary contractor's equipment such as was used on the Welland Canal.

Q--As I recall your reports, speaking generally of it, you reached the conclusion that the Commission itself could effect economies in doing the work which would make it substantially cheaper if the Commission undertook it than if it were undertaken by contract? A--Yes.

Q--And it was because you believed or reported that the work could be done more economically by the Commission itself than by contractors, that you recommended the work should be done by the Commission? A--Yes.

Q--That I think fairly summarizes your report? A--Yes.

THE CHAIRMAN : Did you ever go so far as to advertise for tenders for the work? A -We did. I don't know that it was in the form of an advertisement, although it may have been. We did in this case, take it up with six or seven of the very largest contractors in Canada, and some in the United States.

Q--Did you submit a specific part of the work for them to tender on? A--Yes. The specifications are what I submitted this morning, and the plans. Their part was to construct the canal intake headworks, control works and so forth, and they were submitting their tenders. It was assumed that they could submit their tenders on a unit basis, that is so much for the different classifications, so much per yard for the different classifications of material. Now none of them ever submitted their

contract. I think probably in reading Sanderson & Porter's letter you pretty nearly get the expression of the opinion of the contractors as to the reason why they would not undertake that work on a lump sum basis, that is so much per unit, so much per unit of material excavated.

Q--I can understand a contractor hesitating to take such a big job as this, but if this had been subdivided might the

contractor not have been able to take hold of it.

A--I don't think the magnitude of the job interfered with their entering into a contract. I think that part of it was quite within their powers to go on with. The question was one of the varying market conditions over which they had no control.

Q--But contracts were let all over this continent at that time? A--Yes, and a great many of the contractors went broke on them. A great many of them. And on a contract of this kind, extending over 2, 3 and 4 years, it was one of a magnitude which the contractors would not undertake on other than a cost plus basis to contract for.

Q--That would have been a very dangerous way to let it?

A--Absolutely, it would have, and we felt so, because we felt that it would have cost us a great deal more in the long run to have done it in that way.

Q--You never seriously considered letting it on a cost plus basis? A--No, but the only tenders we received were on a cost plus basis. We asked it the other way, but they came back with the statement that in view of the conditions they could not estimate the future and therefore they could not contract on that basis.

Q--You let the intake? A--Conditions were then different. It was not during the war.

Q--What would be the distinction between the letting of the intake by contract and doing the other part yourselves by day labour? Why if you did one couldn't you do the other? Was it just a matter of conditions?

A--It was a matter of conditions. We came to the point where we could, we thought, reasonably obtain contracts from the ordinary contractor. Prices were becoming more or less stabilized in 1921, and we thought we could obtain a

reasonable contract, and the results of our requests show that we could, the tenders and so forth.

Q--Did you ever go so far as to take a specific part of the work, prepare your specifications for that piece and advertise for tenders for that particular work?

A--Only that in 1916, after we got into the work, and got our plant and organization ready to go on with the work, it would have been a disruption of that organization to have tried to split it up, and probably would have tended to retard the operations, to split it up into separate contracts. And another thing, conditions as you know, were not such up to 1921 at any rate, or the spring or summer of 1921, or fall of 1921, that you could get contractors to undertake jobs of any magnitude.

Q--The dangerous period for contractors was rather at a later date than the time you would first call for tenders for the Canal. Were not conditions more stable at that time than they became later, say in 1920 and 1921?

A --They might have been, but they were not stable in 1917, conditions were of labour stringencies, and so forth, they were rising then, they started in the fall of 1916.

Q--Why could not an experienced contractor protect himself fairly well in the matter of wages?

A--Not ~~ever~~ such a long period as that and especially during the war. That was one of their reasons for not undertaking it.

Q--I read with a great deal of interest that letter of Sir William Hearst. He anticipated the danger from doing it by day work, because, if you had let it by contract, you would know approximately what it would cost you but by day work you would not know. A--That was the reason for calling for tenders in December, 1916. The Commission wanted to know for

themselves, before the receipt of Sir William's letter, the position they would be in with this Canal proposition. They called for tenders, and the result was they did not get any tenders except on a cost plus basis.

COMMISSIONER R. A. ROSS ; Do you know of any contracts of that size let on a lump sum? A--No, I don't know of any.

Q--All the war contracts were let on a cost plus basis?

A--Yes. The Welland Canal contractors at that time asked for release from the contracts they had already entered into, and the Government did release them on certain terms and gave them the contracts from that time on the cost plus basis.

COMMISSIONER J. A. ROSS : You are speaking of construction contracts? A--Yes.

Q--Not of munition contracts? A--No.

COMMISSIONER R. A. ROSS : The Riardon Company were operating at that time, were they not? A--One or two years later.

Q--And they did all their work on cost plus percentage?

A--I think a great many did.

Q--And went broke over it? A--Yes. We have a great deal of data which we will be able to submit to the Commission at a later date, showing the conditions of the contracts that were operating during the period of construction of this Canal; showing the very large increase in costs in the manner in which they were operating.

Q--While we are at it, I have a few notes that will not take long. There has been a considerable amount of consideration about unit costs as affecting the total cost of the work. Will you explain to the Commission what unit costs mean? They include labour, material, plant overhead and interest on the plant, with the total cost

as an addition to that, multiplied by the unit amount and added up, and the costs for engineering, for overhead in your offices, and for interest and so on, that is as I understand it? A--Yes.

Q--There has been some discussion about that and I want to get it clear. I would also like to know whether you kept, or did keep at any time, information as to the labour and material unit costs together with these same items of overhead, such as a contractor would keep, so that you would know month by month just what your unit costs were, did you keep those?

A--In very great detail. In each day there would be a daily report showing the number of men engaged on the various classes of work, and the general class of material used. That would then be incorporated in a combined report for the weekly report, which is available for discussion, showing the labour and material, the general superintendence, the administration, the interest, plant rental, and a number of other items. Not only labour and material charged indirectly into the job, but labour and material charged against the plant account, that would be separated out, and then a monthly cost report would be made in great detail on each section of the work orders; the work orders having been split up into hundreds of separate sub work orders for distribution, for the purpose of getting these costs. These would each have their unit labour, for labour and material, for a direct charge against the work, labour and material against plant, the superintendence, the telephones the railways; the other plant rental accounts would be charged into these different items. These were kept in absolute detail for the purpose of the general superintendent, the engineers and the Commission.

Q--Mr. Francis had access to those? A--He has, in detail.

Q--And is no doubt condensing them in his report?

A--I should judge so, yes.

Q--Have you ever used to check your estimates, the unit costs which you used in your original estimates against the quantities that you took out? A--Yes.

Q--You have done that? A--Yes.

Q--So that that can be got too? A--Yes, we have submitted those estimates and it shows, taking the quantities that have entered into the original estimates, and as actually constructed, that we got a cost in the neighbourhood of 26 millions, adding on the special items that were authorized at a later date. That is referring to the 1917 estimate now, such as deepening of the Canal and lining and others, it comes out approximately 31 millions as the total comparative cost.

Q--I was referring more to your keeping track of the cost of your work? A--We had our unit costs.

(Page 4585 follows)

Q-- You had your unit costs the other way ?

A-- Yes.

Q-- But you did not apply those monthly to see how you were getting on ? A-- Yes, they were all detailed monthly to show exactly how our actual unit costs were.

Q-- You did not apply the unit costs that you had used in your estimates to those quantities which you took out month by month ? A-- No, but from period to period we did.

Q-- And at any rate Mr. Francis could have that ?

A-- Yes, he has that.

Q-- This question of the changing of your schedule had a very large effect on the work which you did ?

A-- Yes.

Q-- Not only with regard to your estimates but with regard also to your requests for appropriations ? A-- Yes.

Q-- At the beginning of the year, you would have a certain normal scale or schedule that you expected to follow, and if you increased or decreased that it changed the amount which you would spend in that year ? A-- Yes, and in addition to that there are unknown factors, which I tried to express to you. So we would prepare our estimates in January or February, and we would then begin discussions with Labor at the first of April for the first of May ; and we might have a twenty five percent increase in our labor charges from that time on. Those would all tend to increase our labor costs.

Q-- I think you stated that you began to make up your requisitions for appropriations about a year and a half before they were needed ? A-- As a rule ; that is the general procedure now.

Q-- What rate of interest have you been charging during the whole course of this development ?

A-- It would average about 6.2 percent. .

Q-- At one time you had four percent. Did it apply on this work at all ? A-- No.

.-- It was always six percent ? A-- No ; it started out in 1916 or 1917 at five or five and a half percent, but the average reached about 6.2 percent.

Q-- But the figures which you used were the ones that were being charged for your interest ? A-- Yes, actually charged for as the original estimates ; that is another point, so far as rates are concerned, our original estimates for 1917 were based on five percent interest ; and, if I recollect right, 1915 would be based on four percent, or it may have been five percent.

HON. MR. ROWELL -- You said that your estimates were made up a year and a half ahead. In running through these estimates this afternoon, it did not occur to me and I do not recall that they show throughout these years that you did that ?

A-- No, I think in the earlier years that was not the case. It has been true for the last two or three years. For instance, this year the estimate of March is prepared for the year 1924.

Q-- But taking these estimates upon which we have been working, just let us get a year to illustrate. Take the estimate for 1920. When was your requisition for appropriations for 1920 presented to the government ?

A-- In January, I should say, 1920, for the year 1920 - 21- 22.

Q-- Apparently it was March 2nd, 1920, the Secretary of the Hydro Power Commission wrote the Hon. Peter Smith enclosing the estimates for the coming year ?

A-- That is 1921 - 22. A revision for 1920, was it not ?

Q-- The fiscal year of the Government is from October to October ? A-- Yes.

Q-- Then to illustrate here, for the Chippawa - Queenston development of \$10,500,000.00 during the fiscal year 1919-20, your final estimate was submitted to the Government on the 2nd March, 1920, that is during the currency of the year ?

A-- Yes, that would be the final. But you will find that the main estimate was submitted in the Legislature previous, either for the part year or the full year. There is always one year ; it might be a misnomer to say eighteen months, but what is meant by eighteen months is that we put in an estimate in January or March for 1920, and that is for the year 1920-21.

Q-- You may be correct Mr. Gaby, and I just want to get it correct. I do not see any other estimate for that fiscal year 1919-20. There may be another. Is it not correct, Mr. Gaby, that the estimate for the year 1919-20, was furnished in the middle of that particular fiscal year, namely, on March 2nd, 1920?

A-- I am not sure about that, because we already had advances from the Province since October 31st, 1919, which would be on some estimate in the previous Session.

Q-- You did at least in this year and apparently in the preceeding year have votes during the then current fiscal year ? A-- Oh yes, we had supplemental estimates in pretty nearly every year. That is, we estimated ahead of time the needs, and then we had supplemental estimates during the year for the estimates of that year.

COMMISSIONER R.A. ROSS -- You are mixing up estimates and appropriations ? A-- Yes.

Q-- Why I brought that question up was this, from the inevitable nature of things you had to predict or guess

at what the conditions would be about a year to two years ahead when you were spending your money ?

A-- As a matter of fact, our estimates were based about three to three and a half to four years ahead, because we estimated that it would take us from three to three and a half years to complete the work, and our estimates were based on that condition as far as estimates were concerned ; but we also had to put in appropriations this year, in February or March of this year we had to put in appropriations for what we are to do in 1924. Not only do we put in supplementaries for anything we have lost out last year this year, but we also have to put our main estimates in for what I call eighteen months, it is really a year ahead. It is not really eighteen months in the average between the years, but to October 31st, 1924 it is eighteen months ; but as far as the estimates are concerned we usually put our estimates in for the whole work before we commenced the work and in this case it has taken three to three and a half years to construct.

COMMISSIONER J. A. ROSS -- Can an engineer estimate accurately three and a half years ahead ?

A-- No ; he can only estimate and then put in something for possible contingencies.

Q-- Doesn't that take a prophet ? A-- Yes, you are quite right, and we are not all prophets. We cannot control, the world is wide and we cannot control conditions, and nobody can. On the falling market engineers estimates are always right, but on a rising market he gets hit.

COMMISSIONER HANEY -- Your year ended October 31st ?

A-- Yes.

Q-- You had ^{not} provided enough money to carry you over the fiscal year until the time when your estimates

would be passed by the Legislature at least ?

A-- Yes.

Q-- If they had been taken care of in one year it would rotate ? A-- Yes, we had to provide for that in the Session before, usually to make sure.

THE CHAIRMAN -- The Legislature does not meet until after your fiscal year is closed ? A-- No. We have to estimate at least a year ahead to take care of the appropriations after the closing of our present fiscal year.

COMMISSIONER J.A. ROSS -- As to the four bids which you took for construction, now were you ever serious-minded about wanting outsiders to do the work ? You needed a larger equipment than they had, and you needed a very vital element of speed which apparently you did not think they had, because that was one of the points you decided in your own favor on ? A-- Yes.

Q-- And you must have known, when you called for those bids, that none of them would be large enough to rely on in such a huge contract ? A-- We were serious in getting our tenders. If we had got a tender at that time and a large guarantee and could have bound the contractor to carry out what he had tendered upon, then I haven't any doubt that the Commission would have treated that tender favorably. But, knowing the conditions and knowing the impracticability of the contractor doing any better than we could in estimating on the work, we were really doubtful about it ; and further, the question did come in whether the contractor would undertake for this one particular job to finance . It would be a very expensive plant to carry for the time we have to carry it on.

Q-- Those are things which you thought out after you called for bids ? A-- To some extent. We prepared our

report on a study of those bids as they came in. We had about a month to prepare our report, not quite a month.

COMMISSIONER R.A.ROSS -- Didn't you forestall investigation in that way, very wisely, as to why you did not contract for it. You know as well as I know that you could not contract for that job during the war ?

A-- No.

Q-- No contractor would do it, and if you got a contractor to do it you would not have confidence in his wisdom ?

A-- No.

COMMISSIONER J.A.ROSS -- Then why did you call for the bids ? You wanted supporting evidence ?

A-- We wanted supporting evidence is one thing, and it was very difficult ; and the Commission wanted to know if it was possible to get someone to undertake that job on a straight contract basis.

Q-- You were driven into a corner of accepting either a cost-plus basis or doing the work with your own staff and your own equipment ? A-- That is right.

HON. MR. ROWELL - - The truth is, Mr. Gaby, isn't it, that you had decided and the Commission had decided before you called for these tenders at all ?

A-- No sir, not at all. The Commission I do not believe in any way had discussed the matter in that way .

Q-- You called for these on December 6th, 1916, and this is the Minute of November 22nd, 1916 :

"Earnest consideration was given to the subject of the Chippawa-Queenston Development. The Chief Engineer's report in connection with the construction of the Canal and plant was carefully discussed. It was finally decided in view of the exhaustive investigations that had been made on the subject

showing the large saving which would be effected, that the Commission would undertake the work direct for the whole of this development, and that an Order-in-Council to cover should be applied for at once, in order that immediate steps may be taken for the preparatory work."

A-- That was something which had escaped my attention. I did not know it was there.

COMMISSIONER HANEY -- That was before you called for tenders ? A-- I thought that was after.

Q-- The Premier knowing that, probably was skeptical about your doing the work and asked for tenders and in view of that you received them ? A-- That may be so. I must ask your pardon for the discussion, because I thought that minute was afterwards. We asked for tenders on December 6th.

HON. MR. ROWELL -- You had already decided on it ?

A-- I guess Mr. Ross was right then.

COMMISSIONER R.A.ROSS -- I did the same thing for some work for the Dominion Government to cover myself.

COMMISSIONER J.A.ROSS -- That is one thing that the Hydro got for nothing.

HON. MR. ROWELL -- Have you got that report ?

A-- No, I think this is the wrong one. He has got another one, \$2,900,000.00 report ; this is October 12th, 1921. It is not the report to which I was referring.

Q-- Is it a report on estimates ? A-- It is a report on the authorization of the Chairman, I think. It is a minute of the Commission, at any rate, showing the sum of additional money requirements. They may have had a report there at the time. The report that I was referring to they may have had there at that time.

Q-- What is this, Mr. Gaby ? A-- Those are minutes of

the Commission.

HON. MR. ROWELL -- Unless the members of the Commission want to ask Mr. Gaby something further, I have not anything further to ask him at the present time except in connection with the estimates he himself made of the increased cost from time to time as he reported to the Commission, and then to ask him something about 1922, and I want to get his reports made in 1921 before I ask about 1922.

THE CHAIRMAN -- We will adjourn now until 2.15 tomorrow afternoon.

Proceedings stand adjourned at 4.25 P.M.
Tuesday, March 27th, 1923, until 2.15 P.M. Wednesday,
28th March, 1923, at the Parliament Buildings,
Toronto.

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